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CLINICAL LECTURES.

SYPHILITIC OSTEITIS OF THE TIBIA.

ABSCESS OF THE THIGH AND ARTHRITIS OF THE KNEE. HYDROCELE. HYDROCELE SIMULATING SARCOCELE.

DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

BY JOHN ASHHURST, JR., M.D.

Professor of Clinical Surgery in the University of Pennsylvania.

[Reported for THE BULLETIN by WM. H. MORRISON, M.D.]

I SHALL to-day show you an interesting case of bone disease. This little girl, without any very definite history, presents a painful enlargement of the tibia. The swelling is circumscribed and very painful. It is what is spoken of as a node. This is a general term, common to all periosteal swellings of a circumscribed character, the word node signifying a knot. The outline of the right tibia is altered; there is marked bulging and also lateral thickening. The part is hard. There is no fluctuation. There is, of course, periostitis, but, more than this, there is inflammation of the bone itself, which may or may not have gone on to the production of pus. In some cases there is a circumscribed abscess of the bone, a condition which is often spoken of as "Brodie's abscess," having been described by Sir Benjamin Brodie, who discovered it in a limb after amputation. The condition had, however, been well described before Brodie's time. A good account of it will be found in the Memoirs of the French Royal Academy of Surgery, and clear directions for its treatment given.

In cases of this kind we may find a circumscribed collection of pus, or a simple inflammation of the bone which has not gone on to suppuration, or there may be found necrosis.

I think that we may find in the present case simple inflammation of the bone, which may be either softened or hardened. The entire medullary cavity may be converted into dense bone, giving the condition termed sclerosis of bone, or, on the other hand, the compact substance may be much softened, resembling the medullary substance.

The treatment of a case of bone disease of this kind with intense pain, is to make an incision through the soft parts, and if nothing is found to account for the pain to make an opening into the bone with Hey's saw or a small trephine. If a sequestrum is found it may be removed. If there is pus, the front wall of the abscess must be cut away so that it may heal from below. If there is sclerosis, it may be sufficient to make an opening into the bone and pass a drill in various directions through the hardened mass.

We have a patient in the hospital at the present time who was treated in this way. The disease affected the ulna, and was the result of syphilis. The bone was opened, and the whole medullary canal was found in a condition of sclerosis. After removing the anterior wall of the ulna and making a large cavity, a drill was passed in different directions through the bone, in order to relieve the tension. Since the operation there has been no pain.

In all these operations on bones we use the Esmarch apparatus, which prevents the loss of blood, and, as the blood is kept from the wound, the view is not obscured. The wound

may be dressed before the bandage is removed, and thus all hemorrhage be prevented.

I believe that in the present case the disease has its origin in hereditary syphilis. There is flattening of the nose, and there are little cicatrices about the angles of the mouth. I think that this condition is quite as significant as any other symptom of hereditary syphilis—certainly as much as the notched teeth, which are often found, although they are absent in this case.

In the left ulna there is a similar deformity to that in the tibia, but this gives no trouble. It has probably been painful at one time, but now the disease has run its course. The tibia is one of the most satisfactory bones to operate on, as it is very superficial and can be readily exposed. On the other hand, the femur and the humerus are unsatisfactory to operate on, as they are situated deeply in the midst of muscles, and it is impossible to make a full exposure of them without dividing the muscles transversely.

I shall now make an incision through the soft parts down to the bone, over the enlarged portion. I scrape back the periosteum, saving it as much as possible. This should be done in all operations on the bones. By so doing the attachment of muscles is not interfered with, there is a better chance of the reproduction of bone, and there is less hemorrhage. Having removed the periosteum, I shall next, with a small trephine, remove a disk of bone, and then decide what further may be required. Having removed quite a thick disk of bone, I find that it will be necessary to resort to the gouge and mallet. With these I remove a considerable portion of bone. The medullary cavity has disappeared, being filled with hard bone. I now reach yellow bone, the color of which is due partly to fatty degeneration and partly to the presence of pus. I shall smooth the sides of this cavity which I have formed, and pass the drill in different directions through the bone, in order to make sure that the tension is completely relieved. Having done this, the wound is thoroughly washed and packed with oiled lint. The dressing will be allowed to remain until it becomes loosened. After a time we shall dress the wound with resin cerate, and, at a still later period, with oxide of zinc ointment. The wound will heal with a depressed cicatrix. I feel as sure as it is possible to be that the patient will be relieved of her pain.

After the acute condition resulting from the operation passes off, she should be put on iodide of potassium, which is useful in all fibrous inflammations. If, as we suspect in the present case, the disease be due to a syphilitic taint, there is a liability that some other bone may become affected. Even where there is no suspicion of syphilis, iodide of potassium is useful in inflammations of the periosteum, and of the fibrous tissues generally.

The wound having now been dressed with the packing of oiled lint, held in position with a compress and bandage, the Esmarch tube is removed, and in order to prevent the blood entering the limb with too much force, I keep it elevated for a few minutes.

Abscess of the Thigh, with Arthritis of the Knee.—This boy was admitted to the hospital one week ago, suffering from an abscess, ready to open, in the popliteal space. An incision was made, and a large amount of pus was discharged. The evacuation of the abscess has not afforded the relief which we had hoped to give. Two days ago I again examined the patient very carefully, and found what I thought were evidences of pus in the muscular tissues of the thigh. There is also destructive inflammation of the knee-joint, and I have no doubt that eventually excision of the knee will be required. We do not like to perform excision in a case of acute disease, or when the patient has fever, and is in a state of constitutional irritation, and I should therefore prefer waiting until the symptoms have ameliorated.

If, to-day, I still find evidences of pus beneath the muscles of the thigh, I propose to evacuate the abscess. This I shall do in the following method: First, make an incision through the skin and superficial fascia, and then pass a director into the supposed abscess. Having found pus, a dressing forceps will be slipped along the director, and when the abscess cavity has been reached its blades will be separated and the forceps gradually withdrawn with a rotary motion. This, which is known as Hilton's plan, is the best and safest method of opening deep abscesses, or those in the neighborhood of important structures.

Turning now to the examination of the limb, you will notice the general swelling of the knee which is characteristic of arthritis. You also see the discharge from the abscess in the popliteal space, which has been opened. There is also a distinct swelling of the thigh, which is very

painful and hot. There is also redness, which, however, is not as marked as two days ago, for the part has been constantly poulticed since then. There are therefore redness, intense pain, swelling, and increased temperature, the four cardinal signs of inflammation. There is fluctuation when I press the part from side to side. This is deceptive, for I find the same fluctuation on pressing the parts in a longitudinal direction. Superficial œdema is also present, and this is another evidence of suppuration. The symptoms are therefore so significant of abscess, that I feel warranted in making an exploration. Of course, I do not think that evacuating the pus in this situation will have any effect on the disease of the knee-joint, but I think that it will afford enough relief from the pain and constitutional irritation to enable us in the course of a few weeks to operate on the knee-joint with more prospect of success than we could at present. The abscess may be simply beneath the muscles or it may be beneath the periosteum. The cause of the abscess is in all probability transmitted irritation from the knee.

I make an incision at the junction of the lower and middle third of the thigh, in such a direction as to avoid the femoral artery. I next carefully work the director through the tissues and at once pus is seen to well up. The probe touches the bone. I pass in the dressing-forceps with the blades closed, open them in the wound, and gradually withdraw them. This lacerates the opening into the abscess and lessens the likelihood of immediate union. It is a good rule when it is desired to make pressure in the evacuation of an abscess, to make what pressure is considered desirable through interposed sponges, and not directly with the fingers. This produces less pain and lessens the risk of injury. Passing the director again, I find that the abscess extends across the front of the thigh and that the point of the probe can be felt a short distance beneath the skin on the outer side. I shall therefore make a counter-opening at that point, and pass a drainage tube across the cavity. The tube is secured by tying the two ends together. This tube should be allowed to remain until the wound becomes covered with granulations; a week or ten days is usually long enough. It is not often desirable to allow it to remain a longer time.

I take advantage of the patient's being etherized to straighten the limb. I perceive no grating, and no effusion in the joint. There is, however, relaxation of the ligaments, and no doubt destruction of the cartilages.

One word about the significance of superficial œdema. It is sometimes a valuable point in distinguishing between a deep-seated abscess and some forms of malignant growth. The presence of this œdema affords a strong reason for thinking that the tumor is due to a collection of pus. [Temporary relief was given by opening the abscess in this case, but the joint-disease advanced very rapidly, and a week afterwards the knee was excised, the patient making a quick recovery.]

Hydrocele.—This patient presents the affection known as hydrocele, that is, a collection of fluid in the tunica vaginalis testis, giving rise to a tumor of pyriform shape with its long axis corresponding to that of the body. In this, it differs from a sarcocele, which usually has its longer diameter in a transverse direction. A collection of blood in the tunica vaginalis would also present this pyriform shape, and under such circumstances other points would have to be relied upon in making the diagnosis, the most certain test being that with transmitted light. In the diagnosis of hydrocele from sarcocele, we have, besides the difference in shape, a difference in specific gravity. A hydrocele is light in proportion to its size, while a solid tumor gives a sense of greater weight when supported with the hand. The test with transmitted light, when it can be applied, is the most satisfactory. It has been tried in this instance and the tumor found to be translucent. It is performed by taking the patient into a dark room and holding a candle on one side of the scrotum while the observer looks from the opposite side, shading off the lateral rays with the hand. If the contents of the scrotum be serous the sac will be translucent. In some cases of hydrocele this test does not apply. The fluid may be dark-colored, or there may be an admixture of blood with it, as sometimes happens in acute hydrocele. In the colored race, the darkness of the skin prevents the light from being transmitted, and rendering this test inapplicable. Again, there may be such thickening of the tunica vaginalis that although its contents be clear, no light will be transmitted. I remember a case occurring many years ago in one of the hospitals of this city, where on account of the failure

of the test with transmitted light and the great heaviness of the tumor, the surgeon diagnosed sarcocele, and proceeded to remove the testicle. An incision was made and a large quantity of fluid escaped. A further examination showed that the tunica vaginalis was greatly thickened and lined with calcareous plates. It can therefore be seen that from the absence of the characteristic signs, the absence of hydrocele cannot be positively asserted. On the other hand there may be transmission of light in some cases of sarcocele. In cystic sarcocele, where there are usually numerous small cysts, there may be one or two large ones, and if the contents of these be clear, a certain amount of light will be transmitted. In order to reach a correct diagnosis, therefore, all the evidence must be carefully weighed.

There is one other point in the diagnosis, more particularly between hernia and hydrocele, and it is also applicable to sarcocele where the cord is not involved. The point to which I refer is that in hydrocele, if the tumor be grasped, it can readily be determined that the part above is not involved and that no portion of the tumor goes into the ring. If the ring be felt for, it will be found to be clear. There may, however, be in some cases hydrocele of the cord associated with hydrocele of the tunica vaginalis. Another point in the same direction is that the history of hydrocele and hernia is different. It will be found that hydrocele begins at the bottom and extends upwards, while the hernia begins at the top and passes downward. Examination of the abdominal ring is, however, more satisfactory than depending on the history.

In regard to treatment, we recognize two modes, one palliative, the other curative or radical. The palliative treatment consists simply in the removal of the fluid with a trocar and canula. The radical treatment consists in adopting some measure to prevent the reaccumulation of the fluid. The plan which I have usually practised, and found satisfactory, is, after evacuating the hydrocele, to inject from two to four drachms of pure tincture of iodine, according to the size of the hydrocele, and allow it to remain. This was first suggested by an East India surgeon, Sir Ronald Martin, and, on the whole, is perhaps the most satisfactory mode of treatment yet recommended. This method of using pure tincture of iodine was particularly insisted on by the late Prof. Syme, who asserted that a cure was thus invariably effected. I cannot bear out this statement, for I have once or twice known the injection to fail, and a repetition of the operation to be required. Many other substances have been used by injection, one of the most recent being carbolic acid. Among other methods of treatment which have been employed is incision of the scrotum and packing the tunic with lint, the introduction of a seton, and the excision of a portion or the whole of the tunica vaginalis. These are all more severe and I think on the whole not so successful as the injection of iodine.

For the present this patient wishes only to have the fluid removed. The only precautions to be observed in tapping a hydrocele are to avoid certain large veins, which can readily be seen, and to be careful not to wound the testicle. Even if the testicle be wounded no particular harm will be done, and indeed irritation of the tunic covering the testicle is one of the methods which have been recommended for the radical cure of this affection. The sac is to be made tense and the trocar introduced perpendicularly to the plane of the scrotum, and as soon as the fluid is reached the point is to be directed upwards.

When the fluid which escapes is of a milky hue, the patient should be warned against exercise. The milky color shows that the affection is a variety of encysted hydrocele, really a spermatocele, a cyst connected with the testicle and the fluid containing spermatozoids. A cyst of this kind is more likely to take on inflammatory action than the sac of an ordinary hydrocele. Some years ago I tapped a large tumor of this kind and instructed the patient to keep quiet. He did so for a couple of days, and then went to market, carrying a heavy basket. As a result of this exertion he had a violent attack of inflammation of the testicle, keeping him in the house for a number of weeks.

Hydrocele with Inflammatory Thickening of the Testicle, Simulating Sarcocele. (*Hydro-Sarcocele.*)—The next patient presents many of the symptoms of sarcocele. He has a scrotal tumor which has lasted for eighteen months. It presents some of the evidences of a solid tumor, but the tunica vaginalis evidently contains fluid also, rendering it difficult to decide in regard to the exact condition of the testicle. You see that the shape of this tumor

is not pyriform as in the preceding case, but that it has its long diameter in a transverse direction.

I shall, in the first place, tap the tumor and remove the fluid, and then if disease of the testicle be found, excision of the organ will be performed. In this operation I prefer, after the testicle is separated, to surround the cord with an écraseur and divide it with that instrument. The cord may be tied in two parts and cut between the ligatures; if it be simply cut across, the bleeding is profuse, and it is often difficult to secure the vessels. There is, I think, less shock when the écraseur is used. When the cord is divided, even if the patient be deeply etherized, the pulse rate often suddenly falls.

There seems to be no involvement of the cord in the present instance. I now introduce the trocar and canula, and at once a large quantity of fluid escapes. The testicle can now be readily examined, and it is found to be hard and heavy, but there is not sufficient evidence of disease to warrant so radical an operation as excision. I will introduce a seton, which can be removed in a few hours, if necessary, and will do nothing further to-day; but the case will be kept under observation, in order that its subsequent course may be observed. [The seton was removed in twenty-four hours, and the patient left the hospital in a week, apparently well.]

DIAGNOSIS OF DISEASES OF THE NERVOUS SYSTEM.

BY J. T. ESKRIDGE, M.D.,

Post-graduate Instructor on Nervous Diseases in the Jefferson Medical College, and one of the Physicians to the Hospital of the College.

[Delivered by invitation before the El Paso County Medical Society, Colorado Springs, Colorado.]

LECTURE II.

ELECTRO-DIAGNOSIS.

[Concluded from the May number.]

ELECTRICAL REACTIONS WHEN THE LESION IS IN THE SPINAL CORD OR ITS MEMBRANES.

WHEN the normal condition of the spinal nerves and the nutrition of the muscles innervated by them remain unimpaired, the electro-muscular contractility is unchanged, or slightly increased. In transverse lesions of the cord in the mid-dorsal region, the lumbar, from which the legs receive their nerve supply, being healthy, the reactions of the muscles of the lower extremities will show no qualitative or quantitative change, except it be a more ready response to both galvanic and faradic excitation. In spinal meningitis, when the cord is not seriously involved in the diseased process, the electrical condition is similar to that found in inflammation of a motor nerve. In the milder cases, and during the early stage of inflammation of the severer ones, before the anterior roots are encroached upon to a great extent, the irritability of nerve and muscle is increased to the application of both currents. If the function of the nerves be seriously compromised or destroyed, muscular contractility is lessened or abolished. When either the lateral or posterior columns of the cord are affected, as in spastic paraplegia and posterior sclerosis, the electrical excitability of the muscles is increased, and does not diminish until the nutrition of the muscles is impaired by disease of their trophic centres, or from muscular inactivity. In myelitis, the multipolar cells in the anterior cornua and the anterior nerve roots are usually affected, interfering with nutrition of nerve and muscle, giving rise to lessened electro-muscular contractility and reactions of degeneration. In the severer cases of myelitis, where life is prolonged, the destructive inflammation may be so great that the muscles will fail to respond to the strongest galvanic or faradic current. In 1859, under the head of acute, ascending paralysis, Landry described a condition attended by rapid and almost universal paralysis of all the voluntary muscles. The paralysis, beginning in the legs, mounts upward, involving the arms, and sometimes those muscles innervated by the medulla oblongata. *Post-mortem* changes so far discovered in this disease have been slight, but evidences of a diffuse myelitis of a mild form have been found by some. Erb, Westphal, Pelligrino, Levi, and Bernhardt state that no anomaly of electro-muscular excitability has been found even after the disease has existed for weeks. (Buzzard.) Dr. Buzzard met with a case, supposed to be due to syphilis, in which the electrical irritability of the muscles was greatly lessened. The almost normal condition of the muscles in this disease forms a striking exception to that usually found in diffuse inflammations of the cord. Whilst the lesion is diffused throughout the cord, no marked changes have been found at any one portion, which probably ac-

counts for the preservation of electro-muscular contractility. Death takes place, as a rule, only when the vital centres in the floor of the fourth ventricle are involved. There is a group of myopathies in which degenerative lesions are found in the multipolar cells of the anterior cornua of the cord, spinal motor nerves, and their associated muscles. Anterior polio-myelitis (infantile paralysis), progressive muscular atrophy, bulbar paralysis, and possibly lead palsy and diphtheritic paralysis are examples. The paralysis in this group may be divided into three classes. In the first class, notably anterior polio-myelitis, the atrophic degenerative lesion begins in the multipolar ganglionic cells in the anterior cornua, and extends to the motor nerves connected with them. The associated muscles of the affected nerves are suddenly paralyzed, and, being separated from their trophic centres, they rapidly atrophy and undergo fatty degeneration. In the second class of the group, as in diphtheritic paralysis, the inflammation is supposed to first attack the nerves, and secondarily the cells in the anterior cornua. In the third, progressive muscular atrophy, for example, according to the theory of Friedreich, the inflammatory process begins in the muscles, extends to nerves, and through these reaches the multipolar motor cells of the cord. In whatever way the trouble begins the result is the same, viz., atrophic degeneration of the ganglionic motor cells, motor nerves, and their associated muscles. To the reactions found in this group of paralysis, when muscles and nerves are stimulated by the galvanic and faradic currents, I wish now to direct your attention. In these lesions we shall find it specially important to study the electrical irritability of nerve and muscle separately.

Loss of Electrical Excitability of the Nerves.—In a few days, two or three, after the appearance of the paralysis, a more or less rapid decline in the excitability of the nerves to electrical stimulation takes place. "This is," says Professor Bartholow, "a quantitative and not a qualitative change." The neural excitability continues to lessen, and by the end of the first or second week is lost, when the strongest galvanic or faradic current applied to the nerve fails to excite the slightest muscular contraction. F. Müller found the nerve excitability lost on the fourth day. (Buzzard.) Professor Bartholow states (Medical Electricity, p. 135), that "the first change that ensues is in the cathodal closing, which disappears, and cannot be induced by any ordinary strength of current; then the anodal closing contraction, and afterward the anodal opening contraction, cease, and finally cathodal closing contractions can be obtained only with the strongest current."

The reactions of degeneration exhibited by the muscles are of great importance, and most typical in this form of paralysis. In the disease we are now studying, viz., atrophic degeneration of the ganglion multipolar cells in the anterior cornua of the cord, a rapid decline in the electro-muscular excitability takes place, but to the faradic current only. F. Müller found, in a case of infantile paralysis, the muscular excitability lost to the faradic current on the fifth and sixth days. "The earliest opportunity which Duchenne had of examining into the electrical condition of the muscles in a case of this kind was the third day. In that instance the right arm was paralyzed. It was not until the fifth day that the electrical excitability of the deltoid was notably enfeebled. On the seventh day, however, it was completely abolished. His experience was, that if the muscles have retained after the seventh or eighth day some amount of contractility to the induced current, they always recover their motility, and the more rapidly the less the excitability has been enfeebled." (Buzzard.) From the fifth to the seventh day in anterior polio-myelitis, muscular excitability begins to decline to the faradic current, and may be totally lost by the end of the second week, and in exceptional cases by the end of the first, or perhaps sooner.

The loss of excitability is permanent in the incurable cases. Where recovery takes place it partially returns, but never reaches normal again when once entirely lost, no matter how perfect the voluntary power of the muscles may become. The character of the muscular reactions to the galvanic current is quite different from that obtained by the faradic. During the first week galvanic excitability declines. In the second it begins to increase and continues to do so for several weeks. After a few weeks the excitability to the galvanic current becomes so marked that a current scarcely sufficient to move healthy muscles will give rise to lively contractions of the affected ones. At the same time that the quantitative change in muscular irritability to the galvanic current is noticed, certain qualitative changes may also be ob-

served. In health muscular contraction excited by the galvanic current of ordinary strength is rapid, and occurs only on closing and breaking the circuit. In this affection muscular contraction is slow and long maintained. The electro-muscular tonus continues during the entire time the current is passing. Qualitative changes are found in the normal formulæ of muscular reactions, giving rise to reactions of degeneration. Anodal closing contraction gradually increases, and may equal, or even surpass, the cathodal closing contraction. Cathodal opening contraction declines, making a complete revolution in the normal formulæ. (Erb and Bartholow.) Finally, quantitative lessening of muscular irritability, even to the galvanic current, takes place, whilst the qualitative changes, or reactions of degeneration, persist. According to Bartholow, very feeble anodal closing contraction is the last evidence of muscular vitality. It is only in extreme cases that all contractile tissue of muscle disappears, when no strength of current will give rise to the slightest contraction. When the diseased process ceases and recovery begins, the galvanic excitability lessens, and the muscles again respond to the faradic current, but never to a normal degree. The abnormal excitability of the muscles to the galvanic current may be present, whilst the excitability of the nerves to the galvanic and faradic currents is normal. (Bartholow.)

The foregoing description of the nature of the reactions in diseases of the anterior cornua of the cord, applies more especially to the acute form, especially as seen in infantile paralysis. But it must be remembered that the nerve cells in the anterior cornua often undergo chronic degenerative changes. Under such circumstances the irritability of both nerve and muscle gradually lessen alike to the galvanic and the faradic current. There is no stage when nerve irritability is lost and that of muscle retained, nor none when muscle irritability is lost to the faradic current and increased to the galvanic. The disease known as progressive muscular atrophy is an example.

Electrical reactions of the paralyzed Muscles when the Paralysis is due to lesion in the Ganglia at the base of the Brain or in the cortical centres of the Brain.—In paralysis of cerebral origin the muscles, as a rule, readily respond when excited by the galvanic or faradic current. As first pointed out by Dr. Todd, in 1847, the cerebral group of paralysis may be divided into three sub-divisions. In the first, those cases of recent origin, those in which the brain near the seat of lesion becomes irritable as the result of inflammation, and we may now add, cases of hemiplegia where the lateral columns of the cord are secondarily affected, the muscular excitability is increased to both currents. In the second, the electro-muscular contractility is normal. In the third, where degenerative lesions have taken place in the motor cells of the cord, or where the muscles have become atrophied from poor nutrition or simply from want of use, the muscular irritability is below the normal.

In supposed hysterical paralysis, so long as the muscular irritability is lessened to the faradic current, a diagnosis of pure hysteria can never be safely arrived at. (Buzzard.)

"*Brief.*"—By including disease of the multipolar ganglionic cells in the anterior cornua of the cord in the list of peripheral lesions, and by dividing broadly the lesions causing paralysis into central and peripheral, we may present in a brief space the behavior of muscles when excited by electricity. When the lesion is peripheral, and has passed the acute stage, the muscular excitability is lessened or abolished to the faradic current, and diminished to the galvanic. The peripheral lesion may be situated in the ganglion cells in the anterior cornua of the cord, as in anterior polio-myelitis (infantile paralysis); or at the point where the nerves penetrate the membranes of the cord, as in syphilis; or at the vertebræ, where the nerves pass encased in bone, as in disease of the spinal column; or in the course of the nerves, when the injury may be caused by blows, exposure to cold or gunshot wounds; or finally in the muscles themselves, as in contusions, and in progressive muscular atrophy, if Friedreich, who regards this disease as beginning primarily in the muscles, be correct in his theory. When the lesion causing paralysis is central, in the brain, or in other portions of the cord than the anterior cornua, leaving the latter in a normal condition, the muscular excitability is normal or slightly increased, as a rule. I am aware that in attempting to embrace the gist of the subject of electro-diagnosis in such a brief space that I have done is at the sacrifice of some accuracy. Such *résumés* aid the mind in retaining important facts until the whole subject is made

familiar to one, but if taken as literally true, this one, at least, is open to some of the criticisms which Marshall Hall's conclusions in regard to the use of electricity in determining the cause of paralysis, received from Drs. Pereira, Copland, and Todd.

I feel that I cannot do better than add the conclusions of Bartholow, found at the end of his chapter on electro-diagnosis:—

"The condition of paralyzed muscles, when affected by causes within themselves, may be ascertained by the application of galvanism and faradism. Both currents are necessary, and the reactions obtained are indispensable to diagnosis of the condition of paralyzed muscles. The reactions of degeneration afford precise indications of the state of the muscles in certain forms of paralysis.

"The motor nerves also react in a definite way to electrical stimulation, and they must be examined separately from the muscular to arrive at an exact knowledge of their condition.

"The reactions of degeneration afford us very important diagnostic indications as to the seat of spinal lesions, and separate broadly the so-called 'spinal' from the 'cerebral' paralysis." (Medical Electricity, Bartholow.)

ORIGINAL COMMUNICATIONS.

ABDOMINAL SURGERY; SEVEN CASES.

BY E. E. MONTGOMERY, M.D.
Late Obstetrician to the Philadelphia Hospital.

[Read before the Clinical Society, February 27th, 1885.]

[Concluded rom the May number.]

CASE IV.—*Large Uterine Fibroid; Removal; Death from Shock; Autopsy.*—Sarah B., æt. 46 years, widow, of temperate habits; entered the Gynæcological Ward in February, 1882, and solicited the removal of a large fibroid tumor. During her early menstrual life she suffered from severe hemorrhages. Her menses ceased, at one time, for five years, and she had not menstruated for two years. The tumor appeared eighteen years before, soon acquired great size, filling up the abdomen. She had been treated with ergotine, hypodermatically, and subsequently by the earth treatment; the latter followed by a slight reduction, due possibly to rest in bed.

The abdomen was very prominent; its walls thin, and the mass had settled down and forward, so that it encroached but little upon the portion above the umbilicus. The tumor was regular in outline and symmetrically developed. The bladder covered the whole of the lower face of the mass. Above, to the right, a small, loosely-connected mass was discovered, between which and the tumor percussion was resonant. The abdominal walls were freely movable over the tumor, but the latter would admit of but limited movement per vaginam. The whole uterus is involved in the growth which rests upon the pelvis. The posterior lip of the cervix was thin, and a probe could be passed into the uterine canal, five inches along the posterior surface of the growth, indicating its origin in the anterior wall. Only the urgent desire of the patient led to an attempt at removal of the growth. By way of preparation she was kept in bed one week, and given iron, quinine, and a judicious diet. Dr. Milliken examined the urine, which was alkaline, but contained no albumen.

The operation was performed March 17, 1882, under thymol spray. Drs. Duer, Warder, Parish, Musser, and Hatfield assisted. An opening three inches long was made for examination; this was extended above to the umbilicus. The peritoneal covering of the tumor was burned through with Paquelin's cautery and the bladder stripped off without difficulty. The capsule was raised on either side, allowing ligatures to be passed beneath the broad ligaments. The lower part of the cervix was then tied in two sections, both subsequently surrounded by one ligature, and the mass removed. Although the hemorrhage had been slight, the condition of the patient became exceedingly critical. The pulse was scarcely perceptible; breathing infrequent, and sighing. It was only through Dr. Parish's stimulation of circulation and respiration by frequent hypodermatic injections of whiskey and ammonia, and assiduous applications of hot water over the chest that she survived until the wound could be closed.

She was placed in bed, artificial heat applied, ergot and digitalis given hypodermatically, and whiskey by the mouth and rectum, but without counteracting the effects of shock. She died at 4 P.M., two and a half hours after the completion of the operation.

Autopsy.—Douglas's *cul de sac* contained two ounces of bloody serum. The kidneys

were small and sacculated, the right containing pus. The cortical structure in both was greatly decreased. The ureters were uninjured by the dissection, but were dilated to the size of the little finger. An inch and a half of the cervix remained below the ligature. The tumor was a solid mass longer transversely, quite regular in outline, presenting at the right upper surface a smaller growth with an elongated pedicle. The whole mass weighed sixteen pounds.

CASE V.—*Epithelioma of Larynx and Œsophagus; Gastrostomy; Death and Autopsy.*—Mrs. C., æt. 46 years, married, had been ill for over two years with disease of throat, which Dr. J. Solis-Cohen pronounced malignant. It apparently began in the arytenoid cartilages, and finally interfered so much with respiration that Dr. Cohen performed tracheotomy in November, 1881, after which, as she lived at a distance from him, he kindly placed her under my care.

The disease gradually extended, involving the lymphatic glands. The neck became greatly swollen, making deglutition possible only for liquids, and these frequently ran into the trachea and were coughed out of the tube. Deglutition finally became so difficult as to require the introduction of bougies. A No. 10 Eng. catheter was at first passed, and the size increased until the French œsophageal bougie was used. Later the swollen glands began to soften, and broke just above the tube, forming a large cavity from which the upper rings of the trachea were discharged necrosed. The extensive ulceration of the throat made it impossible to find the œsophagus, for the introduction of further dilators, and the large opening permitted liquids to escape as fast as taken into the mouth. She was supported for some three weeks on beef blood and whiskey per rectum.

December 17, 1882, assisted by Drs. Warder, Walker, Chase, Martin, Mr. Warder, and Miss Wolcott, the patient was anæsthetized with A. C. and E. mixture, and gastrostomy was performed. An incision two inches long, parallel to the cartilage of the eighth left rib, was made to the peritoneum, when no bleeding occurring it was opened. The liver was seen moving up and down with each respiration. The stomach, being empty, was reached with difficulty. It was transfixed by two pins at right angles to each other, and stitched to the integument, taking care to pick up the parietal peritoneum with each stitch. Fifteen silk sutures were introduced, three of which were to close the upper angle of the wound. The inclosed portion of the stomach was then opened by a crucial incision. The wound was dressed with cotton saturated with a solution of iodoform in collodion; over this absorbent cotton was applied, held in place by a bandage.

After treatment. She was given whiskey ℥j, milk ℥iv, per rectum, every three hours. In the first twelve hours two hypodermatic injections of morph. gr. ¼ each, were given.

9 P.M. T. 99.8°, P. 100.

18th, 7 A.M. T. 99°, P. 104.

10 P.M. T. 98.8°, P. 96.

19th, 7 A.M. T. 98.8°, P. 104.

10 P.M., T. 101.8°, P. 144. The wound was dressed during the day; the upper angle had completely united. An attempt was made to inject some milk, but unsuccessfully; the opening was filled with glairy mucus. She desired to lie upon the left side, but it was followed by severe pain. Morphia gr. ¼ was given hypodermatically.

20th, 8 A.M. Pulse could not be counted. Stupor and mental wandering. Attendant had discontinued stimulant. Ordered whiskey f℥j, tr. digitalis gtt. xx every two hours.

5 P.M. T. 101°, P. 132.

21st, 7 A.M. T. 101°; pulse very feeble and compressible, countenance pale and pinched; sank gradually until 2 P.M., when she died.

Autopsy, twenty-seven hours after death. The abdominal wound had united above the point at which the stomach was attached. The stomach had been opened about the centre of the anterior surface and was well glued to the wound without any extravasation of its contents having occurred. The peritoneum was injected, but no serous effusion or flakes of lymph were present.

CASE VI.—*Menstrual Epilepsy; Oophorectomy; Recovery.*—Sarah H., æt. 17 years, became an inmate of the Philadelphia Hospital in April, 1884. Excepting an attack of inflammatory rheumatism, she was well until her thirteenth year, when she began to have epileptic seizures. These attacks occurred monthly, increasing in number and virulence until her admission. She was unconscious from ten days to two weeks out of each month. She was warned of an approaching attack, by full-

ness in the head, tingling sensations over various parts of the body, and pain in the back. There had been, but once, a trace of menstrual discharge, and that but for a single day.

Family history good. She was pale, flabby, anæmic, poorly developed, and quite hysterical. Extremities were cold, clammy; appetite good, without abnormal cravings; bowels constipated, urine normal. There was a mitral regurgitant murmur. The epileptic attacks varied; some resembled the epilepsia gravior; others, the *petit mal*. In the former, there was a sudden scream, foaming at the mouth, general convulsions, followed by profound stupor for several hours; tongue was bitten; urine and feces voided in bed. In the lighter attacks, she utters a piercing scream, falls from her chair, lies motionless for a few minutes, and recovers without any knowledge of what has occurred. Her falls from bed were so frequent that her mattress was placed upon the floor during the epileptic period.

She was given a generous diet, cod-liver oil, quinine, iron, with various remedies to control the convulsions, as assafœtida, valerian, bromides, chloral, nitrite of amyl and nitroglycerine; other means, as galvanism and massage, were tried with the hope of establishing the menstrual function. Under this treatment her general condition was greatly improved, but there was no indication of the menses, nor any abatement of the epileptic seizures.

After some months it was decided to remove the uterine appendages. By the courtesy of Dr. Stryker, the writer was permitted to perform the operation. The operation was performed, on September 13th. Dr. Hearn administered ether, and Dr. Stryker assisted the operator. The instruments and sponges had been placed in hot water; no other antiseptic was used. An incision two inches long was made, midway between umbilicus and symphysis, through the abdominal walls, the fundus uteri found by the finger, and from it first the right ovary and tube, then the left brought up, ligated with black silk and removed.

In the effort to effect the complete removal of the tissue of the left ovary, the pedicle was cut too short, and the ligature slipped, permitting the ovarian artery to bleed. The stump was quickly seized with hæmostatic forceps and re-ligated. The abdominal cavity was washed out with warm water. Five silk sutures were used to close the wound. The wound was dressed with a thick layer of absorbent cotton, held in place by adhesive strips and a flannel bandage. The operation required thirty-five minutes, and was followed by slight shock. She recovered from the operation without developing symptoms of special interest. The highest temperature, 102°, was reached at 12 M. on the 17th. She was returned to her ward upon the 26th, and that night a severe convulsion occurred. She had a number of convulsions before November 1st, but none so severe as those previous to the operation. In none of them did she fall out of bed, and was perfectly conscious during the intervals. Subsequent to the above date five weeks elapsed in which she was perfectly free of epileptic seizures.

CASE VII.—*Cyst of Broad Ligament; Laparotomy; Recovery.*—Emily A., æt. 30, married, never pregnant, suffered for seven years from an enlargement of the abdomen, which, beginning soon after marriage, was at first attributed to pregnancy. Her menses, however, were never suppressed, and now occur every three weeks. The only distress, excepting pain at catamenia, is the sensation of weight. After coming to this country she was informed that she had an ovarian tumor, in which the adhesions were too extensive to permit of removal. Paracentesis was then performed, and some six times subsequently in as many years. The largest quantity removed at any one time was forty pounds. She at one time suffered from an attack of peritonitis, which kept her in bed three months. October 1, 1884, her abdomen was distended by a nearly symmetrical tumor, which was slightly more prominent on the right side. Fluctuation was distinct over the whole surface. In coughing, the whole mass would be propelled forward and downward. Her general condition was good. The tumor was diagnosed a parovarian cyst, and she was advised to submit to an exploratory incision, with a view of complete removal if the adhesions would permit, otherwise stitch the sac to the integument and insert a drainage tube.

The operation was performed October 9th, Dr. Warder assisting, and Dr. Joseph Martin giving ether. An incision two inches long was made to the sac, which, being easily dissected, the incision was extended to four

inches, and the tumor emptied by the trocar of nearly two gallons of pale, straw-colored liquid. The opening into the sac was increased to admit two fingers to ascertain its character. It was everywhere adherent, but was enucleated without difficulty and without ligating a vessel. The previous attack of peritonitis had glued the peritoneal surface of the tumor to the parietal peritoneum, so that the viscera were shut off above. On the right side was a small globular mass, from whose surface there was considerable oozing. It proved to be an enlarged ovary. By its removal the first opening was made into the peritoneal cavity. The abdomen was packed with sponges, while seven silk sutures were introduced, the sponges removed, a glass drainage-tube inserted, and the wound closed and dressed with salicylated cotton, held in place by plaster and bandage. As in the former case, boiled water was the only antiseptic. The operation occupied forty-five minutes, and was well borne. She suffered pain during the afternoon, for which morph., gr. ¼, was given hypodermatically. This was followed by severe vomiting, which was relieved by a rectal injection of chloral.

The temperature did not exceed 101° until the evening of the seventh day, when it was 102.6°. The drainage tube discharged about three ounces of bloody serum daily. It was removed the fourth day and a rubber tube substituted. With the elevation of the temperature there was a change in the discharge, it became offensive and the abdomen tympanitic. Under quinine, whiskey, and cleansing of the cavity with carbolized solutions, the temperature became normal on the morning of the 11th day. The rubber tube was removed at the end of three weeks, but the sinus did not close for some weeks later. An abscess then formed beneath the cicatrice and opened through it, leaving a sinus an inch long, which has not yet healed.

Remarks.—Case I. being a simple cyst, without adhesions, the operation should have been completed through the first three-inch-long incision. The removal of the remaining degenerated ovary in this case would, probably, have been justifiable from a humanitarian standpoint, but the occurrence of pregnancy and the absence of any further development of the cysts, demonstrate the importance of desisting from such removal in cases where reproduction is desirable.

Cases III. and IV. were very unpromising ones for operation. The latter, in the light of the autopsy, was absolutely hopeless, as from the loss of kidney structure, it is questionable whether she would have survived the etherization, had no incision been made. The chances for the former would have been enhanced had we been properly provided with hæmostatic forceps and the spray dispensed with. The results of operations without antiseptics, by men of large experience, depending upon the most scrupulous cleanliness, lead us to question the value of antiseptics in the above cases, particularly in the prolonged operations. The peril of the patient is increased by the prolonged chilling of the peritoneum, by the absorption of a deleterious agent, and by the increased organic matter washed into the wound from the impure air of the room.

Case II. is another exemplification of the value of colotomy in prolonging life and increasing comfort in malignant disease of the rectum.

In Case V. the operation was postponed too long.

In Case VI. the convulsions have been much less frequent, nearly three months interval occurring between the last epileptic periods. She has just undergone a severe attack of inflammatory rheumatism.

Case VII. demonstrates the importance of making an exploratory incision before pronouncing against the removal of an intra-abdominal tumor.

1305 North Broad Street.

THE PATHOLOGY AND TREATMENT OF CHOLERA.

BY ALEXANDER HARKIN, M.D., F.R.C.S.

[Abstract of a paper read before the Ulster Medical Society.]

THE intimate nature of the poison of cholera has always given rise to much discussion. But whether it be microbe, miasm, bacteria, or some yet undiscovered factor, under the influence of the poison the nervous system becomes rapidly involved, and its influence manifested in every prominent symptom; vomiting and purging are apparently due to an abnormal or excited condition of the nervous supply of the stomach and intestines. The choleraic voice, the vertigo, the cramps, and the tremors betray their neurotic origin. The symptoms of collapse character-

istic of the algid stage, in accordance with the teaching and experiments of Claude Bernard, are dependent upon great irritation and hyperæsthesia of the sympathetic nervous system, while to a similar derangement of the vasomotor nerves may be attributed that depression of the functions of respiration and circulation which are the chief dangers of the disease. We may also discover additional proofs of nervous agency in the instantaneous deaths by cholera that occur in every epidemic, when men are stricken down as if by lightning. Those rapid recoveries that so often occur in hopeless cases forbid the idea that any serious organic affection could have been either causative or concomitant of the gravest symptoms.

In Dr. Henry MacCormac's philosophic exposition of the nature of spasmodic cholera, published in 1832, he states, as his opinion, "that the poisonous agency which produces cholera acts by destroying or diminishing the action of one of the three grand divisions of the nervous system by whose power the human frame is maintained in life and vigor, the respiratory, the cerebral, and the sympathetic, and it is by the lesion or injury of the last that we suppose cholera to be produced." Most of our modern authorities assign a similar reason for its causation. Dr. Johnston gives it as his opinion, in which particular many agree with him, that the specific poison acts primarily on the blood in the intestinal canal and then affects certain portions of the nervous system, especially the sympathetic and the nerve-centres.

It may then, I think, be taken for granted that it is to a lesion of the sympathetic system of nerves that spasmodic or Asiatic cholera is due, and that being admitted, we should expect that in seeking for a remedy it would be natural to look for an agent that will control and influence the system at fault. The indication for treatment, according to Dr. MacCormac, consists in "increasing the power of the stricken system of nerves, in remedying the results of its inefficiency, and in lessening and rendering light and easy the burden of its functions. There is, perhaps, no stimulant, real or supposed, in the catalogue of medicine which has not been tried. We are not acquainted with any direct and certain means of acting on the *sympathetic nerves independently of the rest of the nervous system*, and as this *disadvantage cannot be avoided it must be submitted to*."

Still his success was remarkable, since in the first outbreak, in his return to the Board of Health, in 1852, he gave the details of 726 cases, with only 173 deaths, including patients also suffering from chronic diseases, aged persons, infants, child-bearing women, and many moribund on admission to the hospital. His plan of treatment was, in an adult not previously debilitated, to take from ten to thirty ounces of blood from the arm, to administer a scruple of calomel with two grains of opium, washed down with brandy or whiskey and water, and forty drops of laudanum, the medicine to be repeated in two or four hours until relieved, with stimulating liniment, rest in bed, hot air baths and free draughts of cold water. After a few repetitions of the dose the patient often awoke very weak, but out of danger. The consecutive fever which followed the algid stage was treated on ordinary principles.

When we compare this with the death-rate of fifty per cent. in Paris last year under every possible plan of treatment, modern science has nothing to boast of when comparison is drawn with the practice of half a century ago.

In the diarrhœal stage, as in every other, rest in bed between blankets is indispensable; turpentine and mustard applications to the stomach and abdomen are advisable, with chicken broth and beef tea for nourishment, and soda water and iced water for drinks, which may be given *ad libitum*. Barley water and a weak solution of chlorate of potash are also allowable. Medicinally, dilute sulphuric acid holds the first place. It should be given in repeated doses of ten to twenty drops in some agreeable medium, and ten to twenty drops of laudanum added to each dose.

This was formerly my plan of treatment in cases of sporadic cholera and cholera infantum also, but since the experiments of Claude Bernard have demonstrated the remarkable antagonism between the pneumogastric and the sympathetic nerve, I have discarded all internal remedies in the treatment of those affections, and rely entirely upon stimulation of the pneumogastric. I simply apply with a camel's-hair pencil some epispastic fluid along the course of the nerve in the neck, commonly behind the ear, the right preferably, and extending to the angle of the jaw. The constant and immediate result is that as the irritation of the vesicant commences, an improvement follows, and an end is put instantaneously

to all bowel discharges; the patient finally falls asleep, and awakes cured.

In the second stage, in addition to the purging, vomiting sets in, with spasms and cramps in the stomach and limbs, great anxiety, with violent palpitation of the heart and commencing coldness of the extremities. I have less trouble in applying my topical remedy in this stage as I can promise an immediate relief. As before, I paint the region indicated, and with the same result, an instantaneous abatement of all the symptoms.

In the algid stage, which, according to Claude Bernard, is due to great irritation and hyperæsthesia of the sympathetic, the antagonistic powers of the pneumogastric should also be invoked in a similar manner, and, if necessary, the vagus of the left side should also be appealed to by vesication. I should mention that I prefer blistering the right side first, as Kolman has shown that the right pneumogastric supplies the whole of the small intestines. This is an inhibitory nerve and has an antagonistic action to that of the sympathetic. Moreau and Lauder Brunton have also demonstrated that the division of all the nerves going to a portion of intestines is followed by the secretion of a fluid just like the rice-water stools of cholera. There is another important indication which will be subserved by counter-irritation over the vagus, viz., the restoration of the cardio-inhibitory functions of that nerve, which are evidently in abeyance in cholera. Thus the violent contraction and palpitations of the heart will be controlled. The dilating power of its cavities and walls, especially of the left side, will be restored, and the congestion of the pulmonary system will also be relieved. In applying stimulation to the vagus the rapid effect of galvanism should be tried, as the nerve will be found to respond much sooner than under the stimulation of the epispastic solution alone.

[Dr. Harker, in conclusion, detailed several instances in which his truly philosophic yet simple plan of treatment had been employed with marvellous success in cases of English cholera and cholera infantum, and urged its more extended use in Asiatic cholera.—Ed.]

Dr. A. W. Fritsch, of Evansville, has been appointed to fill the vacancy in the Indiana State Board of Health, caused by the resignation of Dr. Compton, of the same city.

BACTERIAL POISONS.

BY ALFRED S. GUBB, M.R.C.S., L.R.C.P. (LOND.)
Resident Medical Officer, French Hospital, London, W.C.

THE task of assigning the exact role of the various bacteria, micrococci, in determining or modifying those diseases of which they are now recognized to form a pathological part, is one to which many earnest thinkers are devoting their talents and attention. Every step, therefore, made in advance, every suggestion bearing the appearance of plausibility, merits our careful consideration.

Taking the question from a purely biological and chemical point of view, much that is of interest presents itself.

The hypothesis of a "struggle for life" between the protoplasm of the animal attacked and the invading bacteria, where the protoplasm is compelled to compete with the invaders for its subsistence, is contradicted by clinical observation. Indeed, the appearance and symptoms of a patient suffering from one of these maladies, point far more to intoxication than to starvation—to a perversion than to a diminution in functional activity. In this struggle for existence, if the giant succumb to the pigmy, it is not from starvation, which would altogether fail to account for the differences in the variety and mode of onset of their respective symptoms—the uniformity which the action of such a cause would imply is, on the contrary, conspicuous by its absence.

Let us imagine, on the other hand, that they produce their effect, not so much from diverting the nutrient materials from their proper destination, as by a general poisoning, the result of certain deleterious products, which are the outcome of the chemico-physical changes which these organisms set up in the protoplasmic elements with which they come in contact. It is quite conceivable from this point of view that different species of organisms may produce different compounds of a deleterious nature, with special affinities for various organs, and thus produce a train of symptoms *sui generis*. Such a poison, for instance, has been shown to exist in putrid meat by the Danish physiologist Panum, a poison, too, sufficiently stable to resist destruction by means that would prove fatal to any bacteria. Allied to this poison are the *ptomaines*, the noxious alkaloids found *post-mortem*.

The fermentative action of bacteria is so well known that it is but a step to the inference that their waste products may possess poisonous properties, varying according to the particular generating organism. One objection, however, to this view is, that the action of these ptomaines is also tolerably uniform, generally of a tetanizing nature, and bearing more particularly on the nervous system, consequently the same difficulty occurs here in accounting for the different symptoms as in the hypothesis of inanition.

It is not to be supposed, however, that neither inanition nor intoxication by ptomaines have any share in the production of the general results. They contribute their quota, but they do not dominate, they do not confer the prevailing characteristics of the malady. A reasonable explanation of this diversity is rather to be sought in the fact this fermentative action bears, not on any one body of a particular chemical formula, but on the various complex chemical bodies of which the human organism is built up. The more complex bodies result from the combination of various compounds of a simple nature, and the first effect of the fermentative action would be to reconvert the highest compound into its constituent radicals. Hence, the same action applied to equally complex but differently constituted compounds would result in the production of simpler bodies of totally distinct nature and influence. With this in mind, we can easily conceive of an indefinite number of chemical compounds being formed, each with its own particular influence for evil, and whose instant elimination becomes a matter of vital importance to the economy at large. The constitution, and consequently the effect of each resulting compound, depends, first, on the nature of the process, *i.e.*, on the variety of bacteria at work, and, secondly, on the particular chemical molecule attacked.

Take hæmoglobin as an example, this compound has a definite role to play in the economy, but it can only do its work when contained in the red blood corpuscle; once let it escape and be found free in the blood (and this may easily result from various causes), and it becomes not only useless, but in the process of elimination by the kidneys it sets up a violent irritation.

The more complex molecules resulting from the disintegration of the highest order of compounds, only appears to act as poisons to the excretory organs, but when the more simple bodies which enter into the formation of the red corpuscle are set free, the effect is infinitely more serious and intense. When, for instance, the salts of potash, which are found almost exclusively in the corpuscles, are liberated, the toxic effects shown by Bernard and Grandean to result from the presence of free salts of potash in the blood are produced, such as paralysis of the cardiac muscle fibres and general nervous depression; nor are iron salts less hurtful, for Williams demonstrated long since that when free in the blood they are as poisonous as arsenic, or antimony, or colchicin, depressing the nervous system, reducing the blood pressure, and interfering with the normal alkalinity of the blood. More recently the salts of lime and magnesia have been shown to have a like effect, the former resembling the salts of iron, and the latter the salts of potassium in their influence, and it must be remembered that these salts all enter normally into the composition of one or other of the tissues, of which they form an essential and indispensable ingredient.

The conclusion to be drawn from the foregoing is that it is quite unnecessary to attribute these tonic influences to bodies of new formation foreign to the organism, since, as has been shown, they exist in a latent condition in all the highly complex chemical compounds of which the body is constituted, bodies so complex that their rational chemical formula is still a matter of uncertainty, and the elements of which are grouped afresh under favorable circumstances to form fresh compounds, which, though of simpler construction, are capable of powerfully influencing the organism in which they exist under new and abnormal conditions.

CLINICAL HISTORY AND TREATMENT OF "LICHEN RUBER."

BY DR. P. G. UNNA, HAMBURG, GERMANY.

[Translated by Prof. HUGO ENGEL, M.D.]

[Continued from last number.]

THE plaster gauze employed in this and in Case X. reminds me of another therapeutical remark. I tried here the external use of arsenic, after its internal administration, as often happens in lichen planus, had proven resultless. The plaster had so good an effect that nowhere was a part of the skin lost, but only the skin, diseased by the "lichen," be-

came necrotic and fell off. The fact that the pointed condylomata can be destroyed by the local application of mercury and arsenic combined without the healthy skin being injured, induced me to try the same medication in these cases. Arsenic plaster alone may answer for the soft lupus, but for the hard new formations and infiltrations they are without effect. Here mercury must be added to obtain the same result, otherwise gained by the arsenic alone.

Modern dermatology has added to the group of symptoms of "lichen ruber" still another, *a specific affection of the mouth.* Crocker (Monatshefte f. prakt. dermatol., 1882, p. 161) first described it in detail, after Wilson and Hutchinson had slightly made mention of it. But just before Pospelow and Neumann each had reported a case thus complicated. All these cases were instances of lichen planus, and characterized by the appearance of plain, white lines or round spots on the buccal mucous membrane, and on that of the tongue. Crocker even is of the opinion that this affection of the mouth may precede the skin eruption, and possess, therefore, a prognostic value.

Probably the fact that lichen planus is comparatively rare in Hamburg—of about thirty cases of "lichen" treated by me, but seven were lichen planus—is the cause of my never having observed this mouth complication. But in two cases of lichen acuminatus that were in my charge, a peculiar mouth affection made its appearance, either previous to the skin disease or during its course, and in one case I was able definitely to demonstrate the casual relation between the "lichen" and the lesion of the mouth. One was the case of a lady, and, as I reported the history in the Monatschrift f. prakt. Dermat., 1882, p. 259, I shall give here only a short *résumé* of it.

XII.—Mrs. R., æt. 38, married six years, never had lues. Has for the last week an eruption, which is very itching, and showed itself first on the dorsal surfaces of both hands, and thence extended to the extremities, the trunk, and finally the head. Entered my clinic November 12, 1881. Status praesens evinced a typical case of universal lichen acuminatus, which, with the exception of the flexor side of the joints, covers the whole body, the hairy part of the head included. Of special interest are the palms of the hands, the soles of the feet, and the tongue. The first two places are covered with flat, papulous eminences of considerable size, which are translucent in their centre, at their edges bluish-white, reminding one of beginning smallpox pustules in these parts, and itching intensely. The surface of the tongue, on the other hand, is the seat of the erosions, which are from the size of a mustard seed to that of a pea, elongated and round, and surrounded by a whitish layer of horn, and itch greatly. Also characteristic is the great acuteness of the case, which, notwithstanding the enormous number of single efflorescences has nowhere permitted their confluence to plaques. My carbolic-sublimate inunction cure caused a total disappearance of the whole crop within one week. No arsenic was administered, and no relapse had taken place a year later.

That the erosions in the mouth were the same eruption as the exanthem of the skin permits no doubt. Both began and disappeared at one and the same time under a treatment intended for the "lichen" alone, both shared the intense itching, and the fact proves the impossibility of ascribing the affection of the mouth to any known cause. Still, this lesion of the mouth greatly differs from that of the other observers.

The second case is that of a dentist, æt. 39, who nine years ago suffered from a very doubtful affection of his tongue, the complaint lasting with intervals of various lengths for a period of five years, and then ceasing of its own account. Three excellent practitioners had pronounced the tongue disease to be of luëtic origin, although neither the history of the case nor the most careful examination of the body revealed the least sign of syphilitic origin. A fourth physician was equally certain that syphilis had nothing to do with the malady. This view was also shared by Reumont, under whose charge, in Aix la Chapelle, the patient passed through a hydropathic treatment without his being benefited by it in the least. In consequence of an opinion expressed by Reumont the patient married, and the further history of the case, as well as his later marriage relations, seemed to prove that those had been right who had eschewed all syphilitic infection. I myself had, in 1878 and '79, the opportunity to examine the tongue affection. This consisted of gray spots, mostly round, though at times oval, of the size of black pepper, which spots were met with on the

mucous membrane of the cheeks, though mainly on that of the lower lip, and on that of the gums of the lower maxillary bone and on the lower surface of the tongue, near the frænum. These spots formed more or less deep erosions, and generally disappeared after having run a typical course of from three to four days. Smoking had no influence on them, the spots only becoming more sensitive. All the various methods of treatment were utterly without result; relapses could not be prevented. These efflorescences had but little resemblance to those of syphilis and those caused by smoking; they presented a type of their own. After this local disease had ceased for a number of years, this greatly overworked and very nervous patient was suddenly attacked, in 1883, by lichen ruber acuminatus.

January 3d he came to me with a skin eruption, which he was certain had to be ascribed to the immediate influence of an inunction with balsam apple. He said that on account of an attack of muscular rheumatism he had made use of the balsam, and that the small papular eruption had broken out exactly where he had rubbed the balsam into the skin. I saw the eruption a few days later, when it had already spread evenly over all the extremities and the trunk. Though I was sure of the diagnosis of lichen acuminatus from the very beginning, the patient could not get rid of the idea that the eruption had been produced by the balsam, and it was only on account of the intense itching and of the miserable nights that the patient could be induced to employ the carbol-sublimate inunctions at night, while during day time he attended to his professional duties as well as he could. The cure was, therefore, but slowly established, and it was not until the end of January that the patient was free from all eruption. But up to March there still existed a peculiar tendency to chilly sensations, always accompanied by goose-flesh, but in a higher degree than this is usually met with, and I therefore advised him to continue to rub in some of the salve into the parts formerly mostly affected by "lichen." Middle March not a trace remained of the "lichen," all treatment was stopped, and for the last year and a half the patient has enjoyed the best of health.

In the light of this eruption of lichen acuminatus ruber it is perhaps possible to explain the former mouth affection, as it shows a decided resemblance to the lichen-like erosions of Case VIII. Crocker, besides, has laid special stress on this disease of the buccal mucous membrane as often preceding lichen planus. Notwithstanding these facts, I am not certain of the causal connection between the two. But this case leads us to the consideration of another point, viz: the etiology of "lichen," which is as dark as that of most skin diseases in general. That the balsam apple had any influence in causing the eruption need scarcely be disproven. It is a remedy which with us is greatly employed by people especially in the intestinal complaints of children, and more recently it is also made use of to correct the odor of iodoform. There has never been recorded a single case where such a skin eruption had followed the local application of this popular remedy. But it is well to remember in the history of the case the frequent return of light rheumatic troubles and the irritation of the skin each time by irritating and diaphoretic inunctions. In this respect I wish to mention one more case from my practice.

XIV.—Th. H., merchant, æt. 54. The patient, who was well known to me, I having been physician of his family for years, had enjoyed a good health up to 1883, with the exception of his having frequently suffered from all kinds of rheumatic complaints. Even the year before he had complained of vague rheumatic pains in the arms and legs, and of periodically appearing headache. In the beginning of February rheumatic pains again set in, this time combined with a severe catarrh. As the patient had often employed for these pains ichthyol preparations, and as he had invariably done so with success, he made use, on February 4th, without consulting me, of ichthyolvasoline, and rubbed the same well into the skin of the neck, shoulders, and trunk. The following night he was seized with profuse perspiration and the following morning there appeared, especially on the skin where the inunctions had been made, but besides also around the ankles and wrists, intensely itching red papules in considerable numbers. The patient considering them simply an ichthyol exanthem, only omitted the inunctions, and did not consult me until a few days later, when the eruption had spread nearly over the whole body, and had become almost intolerable by its intense itching. To my surprise I found a complete picture of the typical lichen acumina-

tus ruber. But as I was not certain regarding the etiology, and still believed that the papules would slowly change to miliaria or eczema-vesicles, I concluded to wait a few days, and meanwhile ordered cooling drinks and the local application of some indifferent powder. When, however, under this expectant treatment, the eruption not only continued the same, but even increased in extent and severity, and when the itching did not give the patient rest either by day or night, I dropped all scruples, and, February 12th, exactly one week after the appearance of the skin disease, I ordered the systematic inunction cure with the usual carbol-sublimate salve. Two days later I had the pleasure to be able to present this case to my friend, Prof. Bergh, of Copenhagen, who, without a moment's hesitation, at once pronounced it "lichen ruber." I had purposely omitted giving him any information whatever regarding the history of the case. Of the greater value was for me the diagnosis of this experienced clinician, especially as the patient continued to ascribe the cause of the eruption to the ichthyol, of which as a rheumatic remedy he otherwise had a high opinion. February 16th he entered my hospital, to undergo a still more systematic treatment than would have been possible at his own home. Probably in consequence of the prolonged expectant treatment, the nerves of the not too vigorous man were in such an irritable condition that I had to have recourse to bromide of potassium and to morphine remedies, usually not employed by me in cases of this kind. By this time the eruption had spread over the whole body with the exception of the palmar surfaces of hands and feet. The mucous membranes were free, suffering only from a slight nasal and bronchial catarrh. Four days and nights of continued application of the inunction caused a great change in all the symptoms, after the itching had already greatly lessened by the second day. Hence I permitted the patient to move about a little, and instead of the inunction I had a carbol-sublimate glue applied to the skin by aid of a brush. February 23d, one week after his admission to the hospital, the patient was able to leave the institution, completely cured. Since that time, for the last year and a half, I have had the patient continually under my observation, but without ever noticing the least relapse of the former eruption.

[To be continued.]

A CASE OF INTERNAL SQUINT OF ONE DEGREE,

REQUIRING FREE SECTION OF BOTH INTERNAL RECTI MUSCLES.

BY HERBERT HARLAN, M.D., BALTIMORE.

IN operating for the relief of the ugly deformity of crossed eyes, the rule is, as is well known, to cut the tendons of both the offending muscles. This rule is almost invariable when the squint is as much as three degrees, or is of long standing, as in the case of adults.

The following case shows that heroic section may be necessary in even the slightest irregularity:—

CASE.—S. McC., a girl of fifteen years, was brought to my office March 7th, complaining that her eyes were painful while reading or sewing, especially if she attempted to use them at night. Her vision was $\frac{15}{20}$ with each eye, and with the ophthalmoscope I readily recognized the hypermetropia present. A lens of 1 D. + gave V. $\frac{15}{15}$, and perfect comfort for Jaeger No. 1. I ordered this glass.

Two days later, when testing the glasses and looking at the fit of the frames when in position, I observed for the first time that the axes of the two eyes were not parallel, and called attention to the fact.

The mother said she had often noticed it, and if possible would like to have it corrected. Under the influence of a four per cent. solution of muriate of cocaine, I cut the tendon of the left internal rectus, and finding there was still some convergence, I severed the capsule of Tenon freely.

The squint, in the first instance, was so slight as readily to escape notice, and after the section I found was about the same as before. I then instilled atropia and ordered constant use of the glasses, in the hope that the general relaxation of accommodation would produce the desired result.

Five days later I found it necessary to cut the tendon of the right internal rectus, and even after this there was still a shade of convergence. The following day, however, I was gratified to see the eyes perfectly straight, and to hear the patient complain of diplopia. This, however, passed off in a few days, and there has been no further trouble.

THE PROPHYLAXIS AND THERAPEUTICS OF CHOLERA.

BY J. A. S. GRANT (BEY), M.D., CAIRO,
Senior Surgeon Railway Administration.

OUR Egyptian correspondent, Dr. J. A. S. Grant, sends us the following practical rules for the prevention and treatment of cholera, which he issued to his staff and which proved so successful in the great epidemic in that country:—

1st. Conform to and assist every measure of prevention put in operation by the authorities. If you apprehend danger from any public nuisance, immediately complain in writing to the Board of Health.

2d. Apply yourself to make your own home healthy by the instant removal of every nuisance about it and in it. See that your windows will open and shut so as to admit plenty of fresh air night and day.

Every epidemic rages amid filth. Make your children avoid all bad-smelling places. Whitewash all your rooms, and water-closets, and cellars. This has been found one of the most effectual preventives of cholera. Avoid crowding your sleeping rooms.

If there be a constant offensive smell within your dwelling, which other people notice, be sure that there is danger at hand, and do not rest until you have ascertained the cause and had it removed.

Personal cleanliness, and house cleanliness are both health-givers, and are of vital importance when the elements of disease and death are around us.

3d. Having looked to your dwelling within and without, consider then what is best for your welfare in food and clothing.

If there be any food or drink injurious at ordinary times, it is doubly injurious in the presence of cholera. Be very careful not to drink impure water. To be quite safe, it ought to be filtered and boiled and then cooled for drinking purposes. Care should be taken to have the filter in an airy position, and not near any water closet; wash out the filter frequently.

Avoid drinking alcoholic beverages of every kind, unless your doctor considers that you require them.*

Eat, as usual, a mixed diet, but avoid excess even of wholesome food. Do not take what you know to be difficult to digest.

Fruit, only partially ripe, should be cooked before eaten, and all raw ripe fruits should be washed before they are put into the mouth.

A flannel bandage should be worn round the abdomen next the skin, so as to avoid a chill across the bowels. The rest of the clothing should be rather warm than otherwise.

4th. Avoid overfatigue and excess of every kind. Fasting and feasting are equally bad.

5th. When called upon to wait on a choleraic case, be careful not to touch what has been vomited or what has come from the bowels; for in these is the germ of the disease. To make sure of your being properly disinfected wash your hands in water with a little carbolic powder, and dust some of the powder also over your clothes.

Disinfect the patient also by dusting the carbolic powder from time to time on the bed and under the bedclothes, and do not throw down the water-closet what comes from the patient, but have it put into an earthenware vessel and mixed with chloride of lime and vinegar equal parts, and then some water added. Every two or three hours the contents should be buried in the ground. Of course, where there is no garden or ground it must, notwithstanding the risk, be thrown down the water-closet. But the fact that the infected material has been in a strong disinfectant mixture for a time renders it harmless, only one cannot always depend upon this process being properly carried out. Bury, therefore, when possible.

6th. *Disinfectants.*—The best disinfectant is (*a*) "Pure air" and plenty of it. The germ of cholera becomes entirely inert in the open air, and this is the reason why it always travels along routes of communication, whatever the direction of the wind may be.

Persons and baggage coming from infected districts ought, therefore, to be isolated when they, by any chance come into a non-infected district, and it is the duty of any one, who comes to know such a circumstance, that he should communicate it at once to the authorities.

(*b*) Heat is the next disinfectant. It has been ascertained that the germ of cholera is destroyed by a heat of 140° F. Hence, if our food is well cooked and our drink boiled the danger of getting cholera in that way is re-

* But five to ten drops of dilute hydrochloric acid may be drank three times a day, as a prophylactic or preventive treatment.

moved, and it is well to understand that the evidence in favor of the communicability of cholera by means of water and food contaminated with the cholera germ is now overwhelming.

(*c*) Carbolic acid of the strength of five per cent., either in solution or in powder, is a very good disinfectant, but weaker combinations are utterly useless.

(*d*) Sulphurous acid fumes are the most potent volatile disinfectant known, and the easiest way of obtaining this disinfectant is to burn some ordinary sulphur in the place where the disinfectant is required.

(*e*) Chlorine gas is also a most powerful disinfectant, and is most frequently used for disinfecting water-closets and cesspools, because there is no difficulty nor danger in the management of it.

It is obtained from chloride of lime by adding a diluted form of hydrochloric, sulphuric, or acetic acid. Ordinary vinegar being a diluted form of acetic acid, and being generally in abundance in every household, I should advise it to be used, mixing it with the chloride of lime in equal parts. Avoid, however, throwing this disinfectant down iron or lead pipes.

(*f*) Permanganate of potash is a true disinfectant, oxidizing and destroying all contagious material as well as putrid matters; but the quantity required, and the price, render its use almost impossible. If there be no obstacle to its use, then the best combination is as follows:

℞. Permanganate of potash . ʒiiiss.
Hyposulphite of soda . . ʒiiiss.

mixed with ten litres (two gallons) of water; then one-fifth of this to be put into a bucketful of water and thrown down the water-closet at least once in twenty-four hours.

7th. (*a*) The best way of disinfecting the clothing and bedding of a choleraic case is to burn them. If not burned, clothing may be baked or well boiled with soda. Before being sent to the wash-house they should be steeped for half an hour in a five per cent. carbolic solution, or in a mixture of chloride of lime and vinegar, two ounces of each to every gallon of water.

(*b*) To disinfect rooms, scrub floors with hot water and soft soap, which may contain five per cent. of carbolic acid. The walls and ceiling should be brushed and wall paper removed. The furniture, if iron, is to be washed with the carbolic solution and removed from the room. Textile fabrics should be baked, or boiled, or spread out in the room for fumigation. In the last case sulphur is the best medium. It can be lighted by pouring a little alcohol upon it, or by means of a live coal. Every thousand cubic feet of space requires three pounds of sulphur. The doors and windows of the room are to be shut till next day and then thrown open. Whitewashed rooms in case of becoming infected should have the walls scraped and re-whitewashed.

(*c*) The dead body of a choleraic patient should be dusted well with carbolic powder, and wrapped in a sheet saturated with a solution of one part chloride of lime and one part vinegar in forty parts of water, or have it washed in a ten per cent. carbolic acid solution, and then wrap it in a sheet saturated with the same solution, and have it buried as soon as possible.

8th. *Description.* — Asiatic cholera is a specific disease, characterized by violent vomiting and purging, with rice-water stools, cramps, prostration, collapse, suppression of urine, etc., tending to run a rapidly fatal course.

At the commencement of an epidemic, cholera manifests itself without a premonitory symptom, and death takes place in a very few hours; but ordinarily there will be premonitory diarrhœa, the stools being copious and watery, followed by great prostration of strength.

If judiciously treated many persons recover from this, *the first stage* of cholera, but if neglected the disease grows rapidly worse. The stools become more frequent and have the appearance of rice-water. Vomiting now commences, and prostration is complete. There is intense thirst and severe cramps in the limbs, and the voice becomes husky and pulse imperceptible. The duration of this, *the second stage* of cholera, is very uncertain, but the weaker the pulse becomes the nearer the patient is to *the third stage*, or that of collapse, from which few recover. Those who recover, however, often succumb afterwards to some of the complications set up by the primary disease —such as suppression of urine, inflammation of stomach and bowels, etc.

9th. *Treatment.*—In the first stage of epidemic cholera endeavor to stop the purging—here opium is our sheet anchor. The best way of exhibiting it in cholera is in the prepara-

tion known by the name "Tinctura Chloroformi cum opio (Kirby)," of which twenty

℞. Tinct. opii . . . . ℥ss.
Spt. camph. . . . . ℥ss.
Tinct. capsici . . . ℥ss.
Chloroformi . . . . ℥iss.
Spt. vini rect. ad. . . . ℥iiss.
M.

drops for an adult, and five drops for a child should be given in half a wineglass of water or chamomile tea every hour or two till diarrhœa ceases; and no nourishment given except beef-tea or chicken soup and rice.

If the diarrhœa is not checked, and vomiting commences then the "Anticholérique selon

℞. Hydrarg. bichlor. . . gr. ij.
Spt. chlorof. . . . ℥x.
Spt. camph. . . . . ℥v.
Tinct. lavend. co. . . ℥ss.
Tinct. vini rect. ad. . . ℥ij.
M.

Pasteur" should be used, and the other medicine left off. This "anticholérique" contains the ingredients for killing the germ of the disease, and for stopping the diarrhœa, vomiting, and cramps, while it stimulates the heart and favors a general reaction.

It is very hot and biting, and has, therefore, to be mixed with a sufficient quantity of water or chamomile tea to make it palatable. The dose is a teaspoonful to an adult, and half a teaspoonful to a child or young person, in a wineglassful of water, every quarter of an hour, every half hour, every hour, and so on, according to the urgency of the symptoms. Six doses can be given without any danger, even if there are not any of them vomited, and the medicine may, according to these instructions, be administered by a non-professional person, but after giving six doses the physician's visit should be waited for.

Mustard poultices may now be applied over the bowels, and mustard, with a little olive oil, should be rubbed up and down over the cramped muscles.

Thirst should be assuaged by means of ice, which is very agreeable to the patient, while giving water to drink *ad libitum* would only hasten death. The ice should not be stinted, but let the patient eat as much of it as he chooses; he will frequently devour a pound or two of ice in the course of an hour. In the treatment of cholera there can be no question about the value of ice. The patient should be prohibited from drinking water beyond what he gets from the ice, or has to take with the medicine. A little warm chamomile tea, however, may be given in small quantities from time to time to soothe the stomach and allay the vomiting.

In the stage of collapse heat and friction may be applied with advantage to the surface of the body, and give the patient more chamomile tea to drink or even some iced water. Wine and stimulants at this stage do harm instead of good; therefore they must on no account be given.

When reaction comes on—guard against doing too much. Iced milk or arrowroot, or weak beef-tea is all that should be allowed to be given by the mouth, but enemas of beef-tea may be administered by the rectum every six hours in case of great prostration.

Many nostrums have been put forward for the cure of cholera, and in 1865 they were all faithfully tried and found wanting. Since then some new combinations have been proposed, and amongst the others the one indicated above, which I hope may have good results.

THERAPEUTIC NOTES.

CHOLERA.

Prof. Bartholow says as the cholera discharges are distinctly alkaline the universal outward osmosis can only be checked by the administration of an acid. He recommends for the preliminary diarrhœa:—

℞. Acidi sulphurici aromat. . ℥ss.
Tinct. opii, deod. . . . ℥ss.
M. Sig.—Twenty drops in water every hour.

Or

℞. Acidi sulphurici, dilut. . . ℥ss.
Tinct. opii camph. . . ℥iss.
M. Sig.—A teaspoonful well diluted every hour or two.

Many prefer acetate of lead and opium in pill form or in solution. A favorite combination with others is spirits of chloroform, tincture of rhubarb, tincture of cinnamon, and tincture of opium.

Another efficacious remedy is the hypodermatic injection of morphia, gr. $\frac{1}{6}$ and atropia gr. $\frac{1}{120}$. Mustard to the epigastrium or a fly blister will aid in the arrest of vomiting. Other remedies for the vomiting stage are carbolic acid, chlorodyne, camphor, chloro-

form and the hypodermatic administration of morphia and chloral. Both in this and in the algid stage Prof. Bartholow has obtained the best results from the internal use of sulphuric acid combined with the employment hypodermatically of morphia and atropia, followed by chloral. He considers chloral to be more efficient in the treatment of the later stages of cholera than any other single remedy. It frequently allays the vomiting and purging, relieves the cramps and brings about reaction as if by magic. This result is obtained by its action upon the nervous system, where the poison of cholera seems to spend its force. In desperate cases Prof. Bartholow recommends the intravenous injection of salines.

After reaction has been secured the urinary secretion must be restored in order to avoid a fatal result from uræmia or cholera-typhoid.

Prof. DaCosta says that success in the treatment of cholera depends in great measure upon the treatment of the preliminary diarrhœa. Check it and the general mortality will be decidedly lessened. Years ago he was impressed with the value of sulphuric acid in this stage. A valuable combination is—

℞. Acidi sulphurici, dilut. . . ♏x.
Tinct. opii, deod. . . . ♏x.
Aqua menth., pip. . . . ʒij.

To be taken every fifteen to thirty minutes until the diarrhœa ceases.

The experience of the physicians in India has shown that good results may also be obtained in this stage from the administration, every three or four hours, of—

℞. Plumbi acetatis . . gr. iv.
Pulv. opii . . . . gr. j.
Aqua . . . . ʒij.

If the case be one of more than ordinary severity a pill composed of capsicum, opium, and camphor will often produce a most happy effect.

℞. Capsici . . . . gr. iv.
Camphoræ . . . gr. viij.
Ext. opii, aq. . . . gr. ij.

M. Ft. pillulæ No. IV.
Sig. One pill every half-hour.

If the case still go on, and vomiting, purging, with cramps and rice-water discharges occur, Prof. DaCosta says that the first and most important thing to do is to stop the patient from drinking any fluids whatever. His experience in this respect agrees with that of McNamara and the Indian physicians. The patient may be allowed to swallow small pellets of ice which will allay the thirst without overloading the stomach. The whole abdomen should be covered with a mustard plaster to lessen the cramps, nausea, and vomiting. Medicinally, capsicum, opium, and camphor are still to be depended on, but they had better be given in liquid form now, and in small, frequent doses.

℞. Tinct. capsici . . . ♏ij.
Tinct. opii, deod. . . . ♏x.
Aq. camph. . . . . ʒij.

M. Sig.—For one dose. To be repeated every half hour.

If the stomach be too irritable to retain the medicine, morphia may be given hypodermatically. Friction with dry mustard is invaluable for the cramps in the extremities. At times they are relieved in a marked manner by the hypodermatic injection of chloral, gr. xv–xxx, largely diluted.

If the various astringent remedies have failed to arrest the excessive secretion and the case is progressing unfavorably, experience has shown that the alterative plan may be resorted to with advantage. Some physicians advise repeated large doses of calomel. Prof. DaCosta has obtained more benefit from the administration of one dose of gr. v, to be followed by small doses of gr. ¼, every hour.

If collapse be impending, friction with hot mustard, hot turpentine, or hot whiskey, must be persistently employed, and small amounts of warm whiskey or brandy given every few minutes by the stomach or hypodermatically. The hypodermatic use of caffeine, in gr. iss. doses, is warmly recommended by some of the most distinguished French therapeutists. If the patient is still failing, blood-letting has been proposed as a last resort, and has been used with success in some cases. Absorption and circulation appear to have been restored as soon as the venous stasis was removed by the withdrawal of a quantity of thickened blood from the swollen veins.

Prof. DaCosta is convinced, however, that the best results in this apparently hopeless stage will be obtained from the intravenous injection of salines. The effect of this procedure in the cases reported was marvelous. A very good formula for the solution is—

℞. Sodii chloridi . . . . ℥j.
Sodii carb. . . . . ℥iij.
Aqua . . . . . Ovi.

M. Warm to the temperature of 108° and slowly inject ℥ij per minute into a vein until ℥xl have been thrown in. If necessary ℥xl more may be injected after a short time, but it will not be advisable to exceed that amount.

After reaction has been established there is still danger of death from secondary irritative fever or from uræmia due to the clogging of the uriniferous tubules with cast-off epithelium.

EMETICS.

Dr. C. J. Hare, in a valuable paper read before the Harveian Society (British Medical Journal), justly deplores the growing neglect of emetics in the treatment of diseases. Although not a panacea, in certain cases emetics cured in a marvelously short time; and in others they alone appeared capable of saving life. Speaking generally, ipecacuanha was the most useful, in doses of twenty to twenty-five grains of the powder, or six to eight drachms of the wine. The chief value of emetics consisted in their mechanical action upon the viscera; the stomach was not only emptied, but its innumerable follicles were cleared by pressure, the lungs were compressed, and mucous forced out of the air-tubes, and the œsophagus, larynx, and fauces were swept clean. Allusion was made to cases of recurrent vomiting, commonly termed "bilious sick headaches," although more justly to be called "stomach-aches in the head." The persistent vomitings were endeavors of nature to expel the slimy mucus of the gastric follicles and the morbid ferments which it contained. The desired result was often at once effected by an emetic. Many anomalous ailments, accompanied by loss of appetite, nausea, the non-enjoyment of life, ill-temper, etc., were due to a similar cause, and similarly relieved. The removal of the ropy mucus was promoted by washing out the stomach by means of warm water, which excited additional vomiting. Emetics were sometimes of signal service in severe bronchitis, and in capillary bronchitis; the fear of "exhaustion" being produced by emetics was almost confined to those who never administered one. Attacks of catarrhal croup might be cut short, in children, by half a teaspoonful of antimonial wine; and in membranous croup, expulsion of the tough exudation was sometimes effected. Emetics were useful in the early stages of continued fever, of scarlatina, and of measles, and in some cases of whooping-cough. They were decidedly beneficial in the treatment of delirium tremens, and also in acute mania. By the same means, the paroxysms of ague could be greatly modified, and either arrested or rendered more amenable to quinine.

SUB-SULPHATE OF IRON IN DIARRHŒA.

Dr. E. T. Williams (Boston Med. and Surg. Journal), has found the powdered sub-sulphate of iron to be the most satisfactory remedy in chronic diarrhœa. It is not quite so well borne by the stomach as lead and bismuth, but far better than zinc or copper. The dose for a child is from one to three grains; for adults, from three to ten grains, combined with a little opium.

From the Pharmacopœia of the Adelaide Hospital, Dublin:—

MISTURA CARMINATIVA.

℞. Tinct. rhei . . . ♏xlviij.
Magnesi carb. . . gr. ix.
Spts. amm. aromat. . ♏ix.
Aqua . . . . ℥vij.

MISTURA DIAPHORETICA.

℞. Liq. amm. acetatis . . ℥j.
Potassii nitratis . . . gr. xx.
Aqua . . . . ℥vij.

MISTURA DIURETICA.

℞. Potassii acetatis . . . gr. xx.
Spts. ætheris nitrosi . . ♏xxx.
Decocti scoparii . . ℥j.

MISTURA PECTORALIS.

℞. Ammoni carb. . . . gr. iij.
Tinct. scillæ . . . ♏xx.
Syrupi . . . . ℥ss.
Aqua . . . . ℥iij.

—*Canadian Practitioner.*

ICE TO THE SPINE IN REFLEX VOMITING.

Dr. Wm. L. Davies (Mississippi Valley Medical Monthly) was called to see a woman æt. 47, who had been suffering for several days from a severe attack of typhoid fever accompanied with intractable vomiting. All of the ordinary methods were employed in vain; even pellets of ice were rejected as soon as swallowed. Menstruation had been normal for some time, except just preceding the attack of fever, when it was limited in quantity. From the age of the patient and the number of children she had borne, he was inclined to believe that the climacteric was a factor in the gastric

derangement. Thinking, therefore, that the vomiting might depend upon reflex disturbance of uterine origin, or ill-defined spinal derangement, he applied ice in considerable quantity to the lowest part of the spine. The vomiting ceased instantly and a profuse perspiration followed. The subsequent progress of the case was satisfactory, and the ultimate recovery complete in about the average time.

CIMICIFUGA IN PREGNANCY AND PARTURITION.

Dr. J. Suydam Knox, in a paper recently read before the Chicago Gynæcological Society, gave the results of his use of cimicifuga in one hundred and sixty cases of pregnancy. Dr. Knox claims from the observations thus made that:—

1. Cimicifuga has a positive sedative effect in quieting reflex irritability, nausea, pruritus, and insomnia, so common in the last six weeks of pregnancy; it always renders them less distressing, and they often disappear under its administration.

2. Cimicifuga has a positive anti-spasmodic effect upon the parturient woman. The neuralgic cramps and irregular pains of the first stage of labor are ameliorated, and often abolished. In fact during the first indiscriminate use of the drug in all cases, I had the mortification, with a few women, of terminating the labor so precipitately, and without prodromic symptoms, as to be unable to reach the bedside before the birth.

3. Cimicifuga relaxes uterine muscular fibre, and the soft parts of the parturient canal, by controlling muscular irritability, thus facilitating labor and diminishing risks of laceration.

4. Cimicifuga increases the energy and rhythm of the pains in the second stage of labor.

5. Cimicifuga, like ergot, maintains a better contraction of the uterus after delivery.

Dr. Knox's method of administration has been to give fifteen minims of the fluid extract of cimicifuga in compound syrup of sarsaparilla each night for four weeks before the expected confinement.

PELVIC ANODYNES.

Dr. Alfred Meadows (British Medical Journal) says: As a pelvic anodyne, with special reference to the ovaries, I know of none that can compare with conium, or, better still, with the alkaloid conia, used in the form of a vaginal pessary. In all cases, whether neuralgic or inflammatory, in which the ovaries are the seat of pain, conia is, to my mind, quite a specific. No drug that I know of acts with equal certainty and success. Bromide of potassium also exercises most powerful influence upon the ovaries. No drug, in my experience, can equal it in controlling ovarian mucorrhagia; it not only limits the flow but also increases the length of the menstrual interval.

INCONTINENCE OF URINE.

Dr. Clarence G. Hollister, (Medical and Surgical Reporter) has obtained immediate relief from the following prescription in several cases of obstinate urinary incontinence:—

℞. Tr. ferri chlor.
Tr. nucis vomicæ . āā ʒss.
Tr. cantharides . . . ʒvj.
Syr. simp. . . . . ʒij.
Aqua . . . ad. q. s. ʒvj.

M. Sig.—One teaspoonful three or four times a day.

BURNT ALUM AS A TOPICAL APPLICATION.

Goldfeld (St. Petersburg Med. Woch.) recommends burnt alum, either as a substitute for iodoform or in a mixture containing four parts of alum to one part of iodoform. The cheapness of the former substance is the great argument in its favor. The writer maintains that the mixture that he suggests possesses all the advantages of iodoform. It should not be applied to a suppurating wound, he says, because of its irritating action.—*N. Y. Med. Jour.*

SOFT CHANCRE.

Prof. Hebra advises the following abortive treatment of soft chancre: After thoroughly cleansing the sore with spiritus saponis kalinus it should be carefully dried, and pure salicylic acid applied to the surface, which must be covered up with plaster. The treatment succeeds best when this application is renewed for two successive days, and free suppuration ensues. After three days the sore is covered with a white scab. The salicylic acid should now be abandoned and an emollient ointment employed as a dressing. The scab speedily separates, and the wound heals without the formation of a bubo.

TO PREVENT FALLING OUT OF THE HAIR.

Dujardin Beaumetz recommends:—

℞. Chloral . . . grammes 5.
Distilled water . grammes 100.

Use as a lotion every evening before going to bed.—*Jour. de Med. de Paris.*

THE
Medical Bulletin.

JOHN V. SHOEMAKER, A.M., M.D., Editor.
F. A. DAVIS, Att'y, Publisher.
A. L. HUMMEL, M.D., Business Manager.

Philadelphia, June, 1885.

EXPLANATORY.

International Medical Congress.

THE action of the American Medical Association, at their late meeting in New Orleans, in resolving that the Committee appointed by the American Medical Association "to arrange for the meeting of the International Medical Congress in 1887 be enlarged by the addition of members from the Association, one from each State and Territory, and from the Army and Navy, and Marine Hospital Service, and the District of Columbia, to be elected by their respective delegations, and that the members from the States or Territories not represented at this meeting be appointed by the present presiding officer, Dr. J. S. Lynch, of Baltimore, First Vice-President, and that the Committee, thus enlarged, shall proceed to review, alter, and amend the action of the present Committee as they may deem best," has evoked considerable comment among the profession throughout the country. The medical journals, that have been published since the adjournment of the Association, generally express their opinions *pro* or *con*, as the inclination of their conductors prompt them, in a spirit of fairness which is very commendable. Occasionally a harsh expression or sneering innuendo is indulged in, but as such writing effects little it is of no consequence. The whole thing may be explained in a nutshell, and why there should be any dissension created we cannot understand. It is simply this: The Committee of Arrangements, appointed at the meeting of 1884, led away by an excess of zeal, considerably exceeded their power, and did that which the appointing power was not willing to ratify, and the latter, in order more fully to carry out the views of the Association, enlarged the Committee, and thus enlarged, they were granted plenary power to do all that was requisite in the premises.

In order to sustain this view of the case we give the resolutions appointing the Committee adopted at the annual meeting held in Washing in 1884. They are as follows:—

Resolved, 1. That a committee of seven, of which Dr. Austin Flint, the President of this Association, shall be a member, shall be appointed by the President.

2. It shall be the duty of this Committee to extend in behalf of the medical profession of the United States to the International Medical Congress, about to meet at Copenhagen, a cordial invitation to have the next International Medical Congress meet at Washington, D. C., in 1887.

3. That the Committee shall elect its own officers, and that, in case the invitation is accepted, it shall proceed to act as an Executive Committee, with full power to fix the time and to make all necessary and suitable arrangements for the meeting of such Congress, and to solicit funds for this purpose.

4. That the Committee shall have power to add to its membership, to perfect its organization, and that to meet the preliminary expenses of printing, postage, etc., the chairman of this Committee is authorized to draw upon the Treasurer of this Association for an amount not exceeding four hundred dollars.

From the foregoing resolutions it will be seen that they were restricted to inviting the Congress to hold their next meeting at Washington, D. C., to elect their own officers, "to act as an executive committee, with full power to fix the time and to make all necessary and suitable arrangements for the meeting of such Congress, and to solicit funds for this purpose," etc., but nowhere is the power given them to proceed to the length that they have, and herein consists their first mistake, in assuming authority which they did not possess.

Another mistake was that of the Committee ignoring the presence of a portion of the representatives of the American Medical Association at Copenhagen, neither advising nor consulting with them, but, on the contrary, taking upon themselves to placate the gentlemen representing the new Code of Ethics, of whom it may be said, as it was an open secret, that if their society were not distinctively represented in the various sections, they were determined to use their best endeavors to prevent

the assemblage of the Congress in this country. The sequel has proved that they were handsomely appeased; but the members of the Committee must have forgotten the resolutions with regard to the New Code passed at St. Paul. At least we hope they did.

Again, the Committee in endeavoring to perfect the whole machinery for the governing of the Congress, confined their selection of the greater part of the officers to the Eastern portion of the country, as if there were not representative men in every State and Territory, who possess the confidence and esteem of the people among whom they dwell, and who honor any assemblage in which they may make their appearance. The North, South, East, and West should have been equally represented, and not one section of the land heavily weighted at the expense of the others.

It is scarcely worth while to multiply other reasons for the dissatisfaction shown so plainly by the large majority of the members as exhibited at New Orleans, for they are patent to every unprejudiced observer; but let us hope that the Committee as now formed will endeavor to do justice to all sections, push the matter forward to a triumphant success, and thereby allay all small jealousies and petty squabbles, doing that which is right because it is right, and not going outside of our own body for presiding officers, to our own stultification. And now let there be peace, all working together for the common good, and show to our foreign friends that when the members of the American Medical Association tender them an invitation to visit this land of ours they will receive a glorious reception.

CHOLERA.

IN view of the possibility of an outbreak of cholera in the United States this year, too much attention cannot be paid to measures of prophylaxis. The most scrupulous cleanliness should be observed by householders as well as municipalities. Every collection of decomposing animal or vegetable matter must be regarded as a nidus for the dread disease, and promptly removed. Attics and cellars, as well as outhouses, should be purified by the liberal use of whitewash and chloride of lime. Especial attention ought to be paid to the source of water for drinking and cooking purposes. Suspicious wells should be abandoned, and the water used for drinking, no matter from where derived, should be boiled before being used. Forty drops of dilute sulphuric acid should be added to each quart, after cooling, as an additional precaution. All unripe fruits and tainted vegetables must be avoided as a matter of course, but the diet need not be restricted otherwise. Reliance upon the daily use of stimulants as a means of prevention cannot be too strongly condemned. Experience has everywhere shown the futility of this idea, and demonstrated that those who follow it are least able to bear the brunt of the disease.

All authorities agree in declaring that success in the treatment of cholera depends upon the promptness with which the preliminary diarrhœa is checked. The pre-eminent value of sulphuric acid and opium in this stage is universally recognized. The treatment of the later stages of the choleraic paroxysm which is recommended by therapeutists so distinguished as Bartholow and DaCosta, and that which is indorsed by Dr. Grant, of Cairo, will be found in another part of THE BULLETIN. The ingenious method proposed by Dr. Alexander Harkin, of Belfast, is also deserving of earnest consideration, and may be employed in every case, as it does not conflict with internal medication. Dr. Harkin has long been known as an original thinker, and a distinguished clinician. The many valuable additions made by him to our resources are based upon sound physiological and therapeutical premises. The method which he now suggests of antagonizing the choleraic spasm by applying counter-stimulation to the pneumogastric is brilliant in conception, and physiologically correct. It has yielded remarkable results in his hands in the treatment of cholera infantum and cholera morbus. As these affections differ from Asiatic cholera in degree rather than in kind, there is reason to believe that it will be of similar benefit in the latter disease. If further observation establish the truth of this belief, Dr. Harkin will be famous forever as a benefactor of mankind.

MERCURIC BICHLORIDE.

MERCURIC BICHLORIDE is one of the most potent remedies in the materia medica. It is the most soluble of the mercurial preparations, and therefore the most active. It dissolves in two parts of boiling water, or sixteen parts at the common temperature. It is also soluble in three parts of alcohol or four parts of ether. When long exposed to sunlight its aqueous solution is decomposed by the formation of hydrochloric acid and the precipitation of calomel. This action is hastened by the presence of phosphorous or sulphurous acids, and prevented by the presence of the chlorides of sodium or ammonium, or free hydrochloric acid. A small amount of chloride of sodium given in combination will also assist in its absorption. Notwithstanding the ready solubility of mercuric bichloride, it is probable that a double decomposition takes place in the stomach and intestines, by which the albuminate of mercury is formed and held in suspension by means of the alkaline chlorides until absorption is completed. A portion of the liberated chlorine unites with the soda and potash of the food to form soluble chlorides which enter into the formation of the various tissues. The remainder of the chlorine combines with the oxygen present to form chloric acid and chlorates which ultimately diffuse into the blood and increase its alkalinity. It is probable that in this series of changes will be found an explanation of the effects produced by the internal administration of the bichloride, in contradistinction to those produced by the other mercurials.

Like all the preparations of mercury, it diminishes the fibrin and albumen of the blood, and increases the products of waste from every tissue. In small quantities it, however, actually increases the number of red corpuscles, and improves the quality of the blood. Experience has shown that syphilitic patients rapidly improve in health and color under its use, while those to whom other mercurials are given become weak and anæmic. It is incomparably the best remedy for secondary and infantile syphilis. In tertiary syphilis it sometimes effects a cure when every other drug has failed. Its use, however, is not limited to syphilitic affections. As it is a blood-tonic, in small doses it is an efficient agent in various strumous affections. The dose in these cases should not exceed gr. $\frac{1}{24}$, thrice daily, in a bitter tonic. Similar doses long continued retard the growth and lessen the pain of internal carcinoma. Eczema, psoriasis, acne, pityriasis, and other skin diseases, due to an impoverished state of the blood, are remarkably benefited by the following prescription:—

℞. Hydrarg. bichlor. . . gr. j.
Tinct. cinchonæ comp. . ℥iv.
M. Sig.—One teaspoonful in water before meals.

The bichloride has also been used with advantage in acute and chronic hydrocephalus, in chronic endarteritis, and in metrorrhagia due to subinvolution. Its value cannot be overestimated in all low forms of inflammation attended by a hyperplasia of the connective tissue. In sclerosis of the liver, interstitial nephritis, posterior spinal sclerosis, and allied diseases, it has yielded results that could not be obtained from any other plan of treatment. It is an efficient remedy in gastric ulcer, and in some cases of chronic gastric catarrh. It is of especial value in the plastic stage of pleuritis, pericarditis, peritonitis, and other serous inflammations, and in the latter stages of pneumonia. It limits the exudation process in these diseases, and prevents the solidification and hastens the absorption of the products of inflammation.

Externally, it is an excellent application in the various parasitic skin affections. As dangerous symptoms have resulted from its too prolonged contact with even the unbroken skin, a solution of a greater strength than 1 to 500 should rarely be ordered. A lotion of one grain to an ounce of rosewater is an agreeable and efficacious prescription for scabies, phtheiriasis, and tinea versicolor. Pruritus vulvæ and ani, which are so frequently due to the irritation of a vegetable organism, will often be relieved by a similar application. Acne, lichen ruber, and chronic eczema are remarkably benefited by a weak sublimate ointment. Favus and tinea tonsurans require a stronger application. Injections of bichloride have been used in gonorrhœa with the hope of destroying the specific bacteria of that disease. As was to be expected, the desired result was not obtained.

The bacillus of gonorrhœa has not been demonstrated, and all irritant injections are harmful in the acute stage. In chronic gonorrhœa and gleet, and in obstinate leucorrhœa, however, the bichloride is a useful agent, and often effects a prompt cure. Its value as an antiseptic in surgery is everywhere recognized, but its danger when used recklessly must not be overlooked. The hypodermatic administration of the bichloride is the most rapid and effective method of eradicating the syphilitic virus from the system, and is rarely followed by a relapse or any other unpleasant result.

THE COMMUNICABILITY OF PHTHISIS.

DR. W. H. WEBB, of this city, recently read a thoughtful and valuable paper before the College of Physicians upon the contagiousness of phthisis. The belief in the communicability of this disease, which has been always more or less prevalent, received fresh impetus when Koch announced the discovery of the bacillus of tubercle. Since then numbers of cases have been adduced in support of and in opposition to this view, but the weight of clinical evidence, as well as of scientific research is confirmative of its truth.

Dr. Webb's scholarly investigations show that medical knowledge in relation to this important subject has been steadily progressive, and that what now seem to be proven facts, have been anticipated by flashes of truth in almost every epoch of medical history. The discovery of the tubercle-bacillus was not drawn from the inspiration of genius, but from the patient shaping of clinical facts gathered from the time of the Father of Medicine until the day that Koch discovered a peculiar microbe in tuberculous sputa. As a result of the researches and experiments made by Koch, he declared his belief that "Tuberculosis is a specific, infectious disease, caused by a specific micro-organism—the bacillus tuberculosis—which constitutes, in fact, the true tubercle virus." This statement is one of the most far-reaching in its import in the history of medicine.

Theoretical objections were immediately raised against its acceptance, but the tubercle-bacillus is an undeniable fact; all, with the same facilities, may see what Koch and others have seen. It is the one thing tangible, describable, known by its peculiarities among entities as readily as one individual is known from another. To doubt its existence in tuberculosis, is to doubt the utility of scientific medical research, and to abandon further progress to the unstable dreams of theorists. The sputa of the phthisical contain these germs; the air they exhale is loaded with them or their spores, and their introduction into the system of animals will always produce tuberculosis, while nothing else will. Dr. Webb on several occasions examined specimens of air taken from crowded churches and theatres, and invariably found numbers of the tubercle-bacilli present. Furthermore, clinical observations prove conclusively, that healthy individuals, living in an atmosphere contaminated by the phthisical will contract this disease, and not any other which might be due to a lowered vitality, from breathing vitiated air.

MEDICAL NEWS AND MISCELLANY.

DR. JOHN D. MERCUR has removed to 726 South Broad Street.

DR. EDWARD JACKSON has located at 215 South Seventeenth Street.

DR. C. SUMNER WITHERSTINE has removed to 4603 Germantown Avenue.

THE AMERICAN NEUROLOGICAL ASSOCIATION will meet in New York on June 17th.

DR. E. F. HODGES, of Indianapolis, has been appointed to the Chair of Pathology in the Medical College of Indiana.

WE notice with regret the death of Dr. Henry G. Houston, of Richmond, Va., editor of the Atlantic Journal of Medicine.

PROFESSOR PANUM, the distinguished President of the International Medical Congress of 1884, died in Copenhagen on May 3d.

PROFESSOR R. L. REA has resigned the Chair of Principles and Practice of Surgery and Clinical Surgery at the College of Physicians in Chicago.

DR. WILLIAM MURRELL has received the annual prize of the Paris Academy of Medicine, for his demonstration of the value of nitro-glycerine in angina pectoris.

DR. BENJAMIN LEE gave a brilliant reception on May 7th to Dr. Fordyce Barker. Many prominent physicians of this city, New York, and Baltimore were present.

DR. BENJAMIN LEE has removed his offices and hall for remedial exercise and massage to No. 313 South Fifteenth Street. He continues to reside on Manheim Street, opposite McKean Avenue, Germantown.

BACK NUMBERS OF THE MEDICAL BULLETIN WANTED.—The publishers of THE MEDICAL BULLETIN want a number of copies of the journal for January, 1885. Any subscriber sending us that number will have his subscription advanced two months, and all others sending us eighty cents and a copy of the journal of the January, 1885, issue, will receive THE MEDICAL BULLETIN for one year.

JEFFERSON MEDICAL COLLEGE.—Dr. J. W. Holland has been elected to the Chair of Chemistry, which was made vacant by the resignation of Professor J. W. Mallet. Dr. Holland occupied the Chair of Materia Medica and Therapeutics in the University of Louisville for a number of years, where he won a brilliant reputation as an accomplished lecturer and a successful teacher. Dr. Holland graduated from Jefferson Medical College in 1868.

DR. A. L. GIHON, Medical Director U. S. Navy, delivered a lecture at Association Hall, April 18th, on "Sanitary Ignorance Among the High and Low." The lecture which was under the auspices of the Committee on Hygiene of the County Medical Society, was replete with wise suggestions and invaluable information. After the lecture a reception was given in honor of the distinguished orator and sanitarian by Dr. J. V. Shoemaker, at his residence, 1031 Walnut Street.

THE ANNALS OF SURGERY, a monthly Review of Surgical Science and Practice, is the title of the latest competitor for professional favor. It is published by Messrs. J. H. Chambers & Co., of St. Louis, Mo., and edited by L. S. Pilcher, A.M., M.D., New York, C. B. Keetley, F.R.C.S., London, assisted by a large corps of distinguished collaborators. It is the only journal in the English language devoted exclusively to surgery, and as such will be almost indispensable to the working surgeon.

PENNSYLVANIA STATE MEDICAL SOCIETY.—The thirty-sixth annual meeting of the Pennsylvania State Medical Society was held in Scranton, on May 27th, 28th, and 29th. The Address in Surgery was delivered by Dr. E. A. Wood, of Pittsburgh; in Obstetrics, by Dr. C. A. Rahter, of Harrisburg; in Hygiene, by Dr. J. G. Richardson, of Philadelphia; in Psychiatry, by Dr. S. S. Schultz, of Danville; in Medicine, by Dr. E. T. Bruen, of Philadelphia; and in Otology, by Dr. Charles S. Turnbull, of Philadelphia.

DR. F. E. STEWART, of this city, was married to Miss M. Ida Seidel, of Wilmington, Delaware, at the house of the bride's parents, in that city, March 17th. The wedding was a very enjoyable and brilliant affair, guests from New York, Philadelphia, and Wilmington, uniting in the festivities of the occasion. The beauty of the floral decorations was a subject of universal remark, the ceremony being performed in a bower of living plants in flower. A large mirror was so arranged in this bower that its reflection gave a most pleasing illusion of cooling shades beyond, and added much to the general effect of the scene. The bride was dressed in white corded satin, trimmed with point Venice lace and lilies of the valley. The ceremony was performed by Rev. William Aikman, D.D., of Atlantic City, N. J., and Rev. J. H. Nixon, D.D., of Wilmington. Mr. L. A. Chandler, of New York City, was best man, and the ushers were Mr. L. Ferris, of Wilmington, and Mr. W. H. Seidel, brother of the bride, of New York.

GAILLARD'S MEDICAL JOURNAL.—Under the watchful care of the late distinguished Dr. E. S. Gaillard, this journal attained the proud position of being second to none as a representative of American Medicine and Surgery. The multitude of friends who watched its growth and development with unabated interest, were alike pleased and surprised at its increasing usefulness and uninterrupted success. Recently its distinguished founder died, leaving to his wife and children as their legacy the crowning work of a life devoted to medical research—Gaillard's Medical Journal. Since then it has given us unalloyed pleasure to note that the progress of the journal, though deprived of the inestimable value of Dr. Gaillard's guiding hand, is still upward and onward. We feel confident that with its young and brilliant editor, Dr. P. Brynberg Porter, aided by such eminent gentlemen as Drs. T. Gaillard Thomas, W. T. Lusk, Bryson Delavan, and George T. Harrison, of New York, Hunter McGuire, of Virginia, and Claudius H. Maston, of Alabama, nothing but continued success will attend its publication.

AMERICAN SURGICAL ASSOCIATION.—The annual session of this Association was held in Washington, April 21st, 22d, 23d, and 24th. The president's address was delivered by Dr. William T. Briggs, of Nashville, after which the following papers were read:—

"A Device for the Purification of the Air of Rooms used for Operations," by Dr. David Prince, of Jacksonville, Illinois.

"The Field and Limitation of the Operative

Surgery of the Human Brain," by Dr. John B. Roberts, of Philadelphia.

"Nephrectomy, its Indications and Contra-Indications," by Dr. S. W. Gross, of Philadelphia.

"Nephrolithotomy," by Dr. L. McLane Tiffany, of Baltimore.

"The Healing of Arteries after Ligation," by Dr. J. Collins Warren, of Boston.

"The Etiology of Tetanus," by Dr. P. S. Conner, of Cincinnati.

"Some Points in the Surgery of the Hypertrophied Prostate," by Dr. J. W. S. Gouley, of New York.

"An Experimental and Clinical Study of Air-Embolism," by Dr. N. Senn, of Milwaukee.

"Phosphorus Necrosis of the Jaws," by Dr. J. Ewing Mears, of Philadelphia.

The officers for the ensuing year are: President, Dr. Moses Gunn, of Chicago; Vice-Presidents, Dr. Christopher and Dr. Thomas P. Russel, of Baltimore; Secretary, Dr. J. R. Weist, of Richmond, Ind.; Recorder, Dr. J. Ewing Mears, of Philadelphia; Treasurer, Dr. J. H. Brinton, of Philadelphia. Dr. L. McLane Tiffany, of Baltimore, was added to the Council.

AMERICAN MEDICAL ASSOCIATION. — The thirty-sixth annual meeting of the American Medical Association was held in New Orleans on April 28th, 29th, 30th, and May 1st. The address of welcome was made by Dr. Samuel Logan. The President's Address was delivered by Dr. Henry F. Campbell, of Augusta, Ga., during which he referred to the value of the work performed by the Association. He also dwelt upon the importance of every effort being made to secure appropriate sanitary legislation in the various States, and recommended in conclusion that a committee be appointed for the purpose of reëstablishing the section in Forensic Medicine.

On motion, a vote of thanks was extended to the President, and Drs. Isaac N. Quimby, of New Jersey; X. C. Scott, of Ohio; F. E. Daniel, of Texas; J. V. Shoemaker, of Pennsylvania; and Eugene Foster, and H. F. Campbell, of Georgia, were appointed a committee to consider that portion of the address relating to the section in Forensic Medicine.

Section of Practical Medicine.—The Address in Medicine was delivered by the chairman, Dr. H. D. Didama, of Syracuse, N. Y. Among the other papers read in this section were: "On Carbuncle," by Dr. H. D. Bulkley, of New York; "The Percuteur," by Dr. A. F. Patte, of Boston; "Hydatid Tumors," by Dr. R. Harvey Reed, of Mansfield, Ohio; "An Attempt at the Radical Treatment of Tuberculosis," by Dr. James F. Whittaker, of Cincinnati, Ohio; and "The Hypodermatic Injection of Oils and Fats," by Dr. J. V. Shoemaker, of Philadelphia. Dr. W. C. Van Bibber, of Baltimore, read a paper on "Peninsular and Sub-Peninsular Air and Climate."

Section on Surgery and Anatomy.—The Address in Surgery was delivered by the chairman, Dr. Duncan Eve, of Nashville, Tenn., after which the following papers were read: "False Doctrines in the Treatment of Fractures," by Dr. John B. Roberts, of Philadelphia; "The Treatment of Compound Fractures by Free Drainage and Wiring of Bones," by Dr. Virity, of Illinois; "Do we Find from Micro-Organisms in Inclosed Cavities a hitherto Unsuspected Danger to Surgical Lesions?" by Dr. H. O. Marcy, of Massachusetts; "The Surgical Treatment of Cysts of the Pancreas," by Dr. Senn, of Milwaukee; "Two Ovariotomies on the same Patient," by Dr. Ransohoff, of Cincinnati; "Giant Growth of the Lower Extremities;" "Case of Necrosis of Tibia and Fibula of Ten Years' Duration, Operation and Recovery," by Dr. R. H. Jenkins, of Georgia; "Colo-Proctitis treated by Hot-Water Douche and Stretching or Division of the Sphincter Ani," by Dr. A. T. Garnett, of Washington; "A New Combined Trocar and Canula, and Aspirating Needle," by Dr. H. L. Getz, of Iowa; "Fibroma of the Scalp," by Dr. Owens.

Section on Obstetrics and Diseases of Women.—The Address in Obstetrics was delivered by Dr. R. S. Sutton, of Pittsburgh. The papers presented in this section were "The Treatment of the Secundines in Abortion and Labor," by Dr. William H. Wathen, of Louisville, Ky.; "Parametric Abscess," by Dr. W. W. Potter, of Buffalo; "Chronic Peri-Uterine Abscess; its Treatment by Laparotomy," by Dr. C. Fenger, of Chicago; "How soon after Exposure to Sepsis may the Accoucher resume Practice," by Dr. George French, of Minneapolis; "Abdominal Tumor," by Dr. J. A. T. Payne, of Galveston, Texas; "The Multiple Speculum Uteri and an Improved Dressing Forceps," by Dr. Munn, of Savannah; "The Improved Technique in Gynæcological Operations, Minor and Major," by Dr. J. Englemann, of St. Louis; "Speculi," by Dr. Henry O. Marcy, of Boston; "The Role of Bacteria," by Dr. Henry O. Marcy; "Vaginal Hysterectomy for Cancer," by Dr. A. Reeves Jackson, of Chicago; "Emmet's Operation—When Shall it and When Shall it not be Performed?" by Dr. E. Zink, of Cincinnati; "Reasons for and Results of some Cases of Tait's Operation," by Dr. Gordon, of Maine; "Intra-Peritoneal Adhesions in Relation to Tait's or Battey's Operation," by Dr. B. G. Heard, San Antonio, Texas; "Notes on Surgical Gynæcology in the Berlin Clinics," by Dr. Horatio Bigelow, of Washington; "The Ring of Bandl," by Dr. W. A. Jaggard, of Chicago.

The Address in "Opthalmology" was read by Dr. J. A. White, of Richmond, and the Address

on "Diseases of Children," by Dr. J. H. Pope, of Texas.

A number of reports were received and approved by the Association during its session, among which were a report of the life and services of the late Professor Gross, by Dr. J. G. Richardson, of Philadelphia.

A report from the Committee to secure a Congressional Appropriation for a Fire-proof Building for the Army Medical Museum and Library, by Dr. J. S. Billings, U.S.A., in behalf of Dr. Austin Flint, chairman of the Committee.

Reports from the Committee on Meteorology; the Committee on the Collective Investigation of Diseases, and the Special Committee on the Code of Ethics, by Dr. N. S. Davis.

A report from the Rush Memorial Committee, Dr. A. L Gihon, U.S.N., Chairman, and the report of the Committee on Publication, by Dr. J. M. Toner.

The unauthorized and precipitate action of the committee which was appointed to issue the invitation for the Ninth International Medical Congress, was justly regarded as an unprecedented usurpation of power on the part of the committee, as well as a violation of the rights of the Association. The presentation of their report, therefore, gave rise to an animated discussion, which was participated in by Drs. Keller, of Arkansas; J. S. Billings, U.S.A.; Willis P. King, of Missouri; F. E. Daniel and H. C. Ghent, of Texas; Beverly Cole, of California; D. D. Sanders, of Tennessee; A. R. Smart, of Michigan; and John B. Roberts, and J. V. Shoemaker, of Philadelphia.

Dr. Daniel offered a resolution that the Committee on Nominations be instructed to nominate a president and other officers for the approaching International Medical Congress.

Dr. Quimby said it was a matter involving serious principles; the committee had gone beyond their authority from the Association in assuming executive and legislative functions.

Dr. Keller offered as a substitute for Dr. Daniel's resolution, a motion that the President of the Association should appoint a committee consisting of thirty-eight members, representing the army, the navy, the marine-hospital service, the District of Columbia, and the Territories (to be nominated by State delegations); this committee to meet the original committee, to review, alter, and amend the latter's action as it might deem best.

Dr. Cole seconded Dr. Keller's substitute.

Dr. Sanders moved that the committee's work be indorsed, with the proviso that they leave out the New-Code men. Dr. Billings had previously said that no bargain had been made with the New-Code men.

Dr. Roberts spoke in favor of Dr. Sanders's resolution.

Dr. Smart said that the committee had undoubtedly exceeded its authority. He suggested that each State should make its own nominations, as was aimed at in Dr. Keller's motion.

Dr. Sanders's resolution was lost by a vote of eighty-eight to one hundred and twenty-nine.

Dr. Keller's substitute was then put and carried, by a vote of one hundred and thirty-one to ninety-two.

The next meeting of the Association will be held in St. Louis, on the first Tuesday of May, 1886, and continue during the following three days.

The officers for the ensuing year are: President, William Brodie, of Michigan; First Vice-President, Samuel Logan, of Louisiana; Second Vice-President, A. Y. P. Garnett, of the District of Columbia; Third Vice-President, Charles Alexander, of Wisconsin; Fourth Vice-President, G. W. Peck, of Iowa; Permanent Secretary, W. B. Atkinson, of Pennsylvania; Assistant Secretary and Treasurer, R. J. Dunglison; Librarian, C. H. A. Kleinschmidt, District of Columbia.

For Officers of Sections—Practice of Medicine: Chairman, J. T. Whitaker, of Ohio; Secretary, B. L. Coleman, of Kentucky. Obstetrics and Diseases of Women: Chairman, S. C. Gordon, of Maine; Secretary, J. F. Y. Paine, of Texas. Surgery and Anatomy: Chairman, N. Senn, of Wisconsin; Secretary, H. M. Mudd, of Missouri. Ophthalmology, Otology, and Laryngology: Chairman, Eugene Smith, of Michigan; Secretary, J. Fulton, of Minnesota. Diseases of Women and Children: Chairman, W. D. Hazzard, of Tennessee; Secretary, W. B. Lawrence, of Arkansas. Oral and Dental Surgery: Chairman, J. Marshall, of Illinois; Secretary, A. E. Baldwin, of Illinois. State Medicine: Chairman, J. H. Rauch, of Illinois; Secretary, F. E. Daniel, of Texas. Committee on Necrology: J. M. Toner, of the District of Columbia. Judicial Council: R. A. Kinloch, of South Carolina; D. D. Sanders, of Tennessee; T. G. Richardson, of Louisiana; G. A. Ketchum, of Alabama; George Beard, of West Virginia; J. M. Toner, of the District of Columbia; and A. M. Pollock, of Pennsylvania.

Dr. Morris H. Henry, of New York, was appointed delegate to the British Medical Association.

In a recent novel a young lady falls down a precipice and is supposed to be dead, but her companion (a young gentleman) announces her to still live, having felt pulsation in her *femoral* artery. A candidate for medical honors also declares in her examination paper that "Bleeding from the nose is neither Venus nor Artillery—it is Caterpillary."

REPORT OF INTERESTING CASES
TREATED AT
THE SURGICAL INSTITUTE,
NORTHEAST CORNER OF BROAD AND ARCH STREETS, PHILADELPHIA, PA.

BY J. G. ALLEN, M.D.,
Surgeon in Charge.

(Continued from last number)

SOMETHING may be done in cases of infantile paralysis by efforts to recall the affected parts "to a sense of their duty," by means of properly regulated exercises and massage—methods of treatment that have long been known and used and that are of some utility in fostering and aiding the repeated efforts which nature seems to make—with varying degrees of success—to reëstablish the lost vitality of the affected parts. But the best efforts by these measures alone, will usually be productive of a very limited degree of success. The enfeebled, cold, and withered limb, characteristic of infantile paralysis, requires much more than active massage to restore the circulation and increase the amount of blood going to the paralyzed parts. This is accomplished at the Institute by means of a very valuable and important modification of the old Junod or "vacuum boot." (Fig. 6.) The modification here represented consists of a double chamber, one surrounding the other; into the outer chamber steam can be passed so as to raise it to any required temperature; from the inner chamber the air can be exhausted so as to create a partial vacuum. This apparatus is absolutely indispensable in the treatment of infantile and allied cases of local paralysis. The enfeebled, cold, and paralyzed limb (arm or leg as the case may be), is placed in the inner chamber of the apparatus, and the steam let into the outer chamber so as to elevate the temperature to about 108° or 110° F. After the limb is thus thoroughly warmed, the air is partially exhausted from the inner chamber. This requires judgment and delicate management. The atmospheric pressure removed should be just enough, and be continued just long enough, to cause a complete flushing and active congestion of the capillaries, great care being taken to avoid anything like a livid or cupping-glass-like congestion of the limb. After a satisfactory tendency of blood to the part has been secured, the limb is removed, manipulated and kneaded by massage-machinery described in Fig. 2, or passively exercised on the shaking apparatus, Fig. 7. By systematic perseverance in this treatment, the limb grows firmer and stronger, very often resulting in the reëstablishment of the lost power and the functional activity of the part, even in cases that have hitherto been generally considered as quite without the pale of medical or surgical assistance. Chronic, obstinate, and intractable uterine engorgements are also often found to yield to a similar course of treatment. The daily systematic diversion of blood to both lower limbs, produced by the vacuum treatment just described, followed by properly regulated exercises and massage, will often relieve uterine and pelvic engorgements after every device of local treatment has failed.

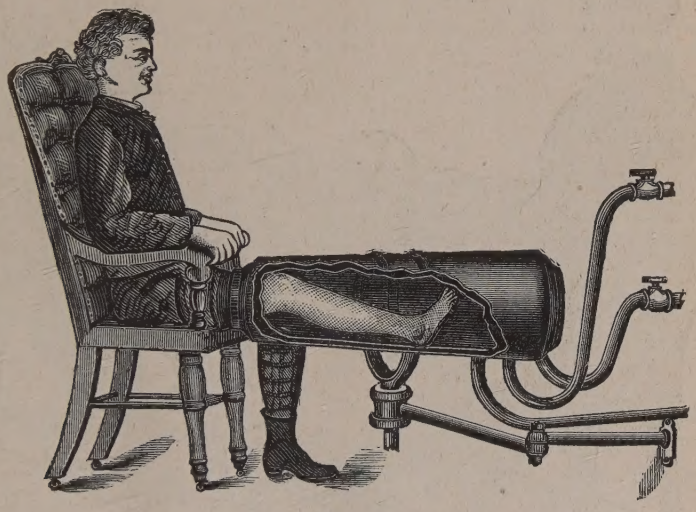

FIG. 6.

Fig. 7 represents an apparatus for giving an active, shaking exercise to the limbs. It is intended to do the work of, and is greatly superior to, the oscillating Swedish movement machine. The foot-rest, *B*, is moved very rapidly by a crank motion on one end and a spring suspension on the other. When set in motion the feet and limbs are actively jostled, so that a full equivalent for active exercise is obtained, the capillary circulation in the muscles being especially stimulated. The same condition is brought about by a similar movement of the hand-rest *A*.

The exercise thus afforded is entirely passive so far as any personal effort or expenditure of nerve-force is required of the patient, but it is fully equivalent to active exercise, so far as its effects on the parts exercised are concerned. It is very useful for a large class of paralytic cases, and especially so in connection with the vacuum treatment just described, Fig. 6. Dyspeptics, and individuals with torpid circulation, cold feet, cold limbs, etc., are also almost invariably relieved by using this machine.

The cases of paralysis, particularly of the infantile variety, that have been greatly benefited by the method of treatment here described, are numbered by the hundreds. We have only space for one or two, which are typical, and are not more favorable than the average in the results obtained :—

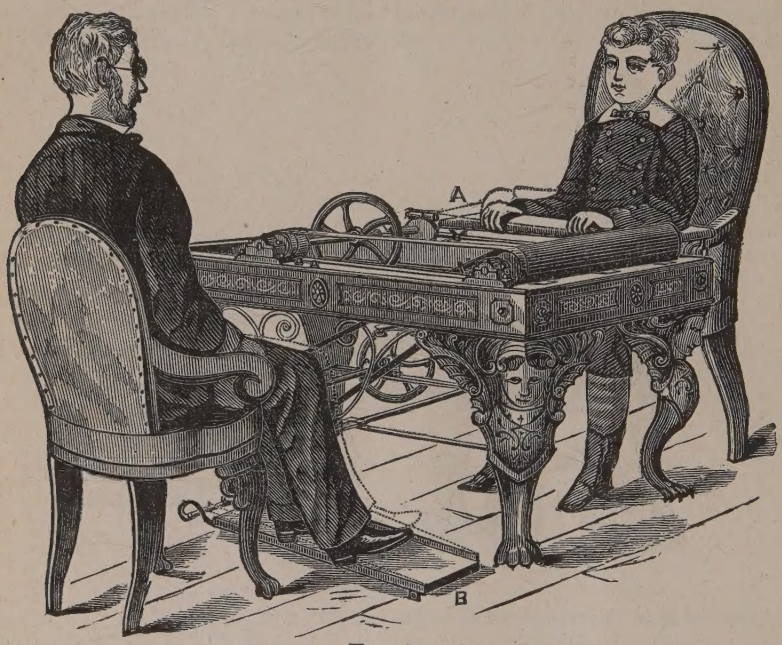

FIG. 7.

K., a male child, æt. 3 years, was brought to the Institute suffering from infantile palsy, which had occurred suddenly during dentition two years previously. Both legs were withered, cold, and utterly powerless. The gastrocnemius muscle, however, seemed to have sufficient vitality left to remain in a state of permanent contraction sufficient to retract the heel and produce mild *talipes equinus*. The child had never made an attempt to stand, nor could it even occupy a sitting posture without some prop or support. The arms also were greatly affected, though a good power to grasp remained. The general health and intellect seemed remarkably good for one otherwise so generally powerless. The vacuum treatment, combined with proper exercise and massage, was persevered in for twelve months with the most gratifying results. The cold and lifeless limbs soon began to be habitually warmer, the circulation rapidly improved, and with these favorable changes growth, development, and solidifying of the flesh occurred, till ultimately sufficient power returned to enable the child to stand entirely alone, and now with the usual method of brace supports it can locomote actively on crutches, and will ultimately (if treatment be continued) be able to walk satisfactorily.

Another case: Female child, two years of age, was brought to the Institute with complete infantile paralysis of the left leg, and only partial power of muscles of the thigh of right leg, the muscles below the knee being completely paralyzed. The hands and arms were strong and well developed. The child's method of locomotion was to drag herself along on the hands and abdomen. This condition of things had existed without any improvement for a full year. During a period of six months the vacuum treatment was regularly used, combined with passive exercise and massage. The right leg rapidly manifested an improved circulation and development, soon regaining sufficient power to enable her to locomote rapidly on crutches. The left leg more slowly, yet steadily improved, until now, at the end of twelve months, she can walk pretty well, using only a set of well adjusted brace supports for the legs.

[To be continued.]

BALTIMORE NOTES.

EDITED BY

HERBERT HARLAN, A.B., M.D., Cor. Sec'y Alumni Association of Univ. of Md., Surgeon to Presbyterian Eye and Ear Hospital, and Ass't Dem. of Anatomy, Univ. of Md.; and HIRAM WOODS, A.M., M.D., Surgeon to Presbyterian Eye and Ear Hospital, Chief of Clinic on Dermatology, Univ. of Md., etc.

Dr. William F. Coleman, the oculist, from St. John, N. B., after staying here a few months, has moved to Chicago.

Dr. F. West, late of University Hospital, has located at 209 West Lombard Street. Dr. Joseph T. Hering has settled at Westminster.

Several of our recent graduates had made their plans to see some military surgery in the English army, in the expected war with Russia. They are now, however, thinking of other things. Among these, Dr. E. P. Turner has opened an office at 205 West Lombard Street.

The City Council has passed an ordinance, which the mayor has signified his intention of approving, to sell the City Spring lot to the College of Physicians and Surgeons. The agreement being that the college is to build, equip, and maintain a morgue. The lot adjoins the college building on the north side.

The third annual commencement of the Woman's Medical College, of Baltimore, was held May 1st, and diplomas were conferred on the following graduates: M. Laura Ewing, of Maryland: Alice S. Parkhurst, of Maryland; Clara Steinbrenner, of Maryland; and Marie E. Thalwitzer, of Germany. The valedictory address was delivered by Professor J. Edwin Michael, of this city. The degrees were conferred by Professor R. H. Thomas, of the Faculty.

The Medical and Chirurgical Faculty of Maryland met on the 12th of May, and continued in session five days. A large number of interesting and valuable papers were read. The following officers were elected: President, Dr. John R. Quinan; First Vice-President, Dr. C. E. Baldwin; Second Vice-President, Dr. J. Edwin Michael; Recording Secretary, Dr. G. L. Taneyhill; Assistant Recording Secretary, Dr. R. T. Wilson; Corresponding Secretary, Dr. T. Barton Brune; Treasurer, Dr. W. F. A. Kemp.

OUR ADVERTISERS.

SUGGESTIONS IN REGARD TO THE USE OF MINERAL EARTH IN CUTANEOUS ERYSIPELAS.—In the treatment of cutaneous erysipelas the Mineral Earth is made into a paste with water. This paste is thoroughly mixed and made pliable by kneading it. It is then spread, with a spatula, from one-quarter to one-half inch thick over the entire surface affected with erysipelas, and then covered with cheese cloth, over which absorbent cotton and roller bandages are placed. The atmosphere is entirely excluded by the casing, and the inflamed skin soon subdued. This treatment is handy and very agreeable to the patient. It quiets the burning pain of the erysipelas, and generally limits its spread. In conjunction with the usual remedies employed internally in the treatment of this disease, it will be found not only convenient but useful as a local dressing.—*Texas Courier-Record of Medicine.*

CHOLERA INFANTUM.—On page 153, Vol. VII., of Ziemssen's "Cyclopedia of Medicine," we notice the following: "Regulation of the diet constitutes in fact the principal method of treatment of sporadic cholera, and particularly cholera infantum. When mother's milk is insufficient, Liebig's Food, or Nestlé's Lacteous Farina are *alone to be recommended.* The latter is *especially* commendable because the physiological relations of the infantile digestive organs, particularly the lack of notable salivary and pancreatic secretions, are taken into account in its fabrication; the starch contained in it having been transformed into dextrin."

Among the French specialists, Drs. Monod and Morpain have indicated Nestlé's Food specially as a product of the most wholesome character, and entirely preventive of diarrhœa and intestinal inflammation. With no desire to detract from the merits of other infant foods, we have thought it proper to indicate to the profession the above quotation from a standard work of the highest reputation, in view of the probable infantile sickness to be apprehended during the summer of 1885.

DYER'S SPECIAL CREAM BRAND.—It is said that the most *natural*, the most perfect substitute for mother's milk is *milk again*, particularly cow's milk *properly diluted* and sweetened with sugar of milk. Cow's milk in its ordinary state, however, is not properly reliable and digestible for either infants or invalids. But by the new process employed in the preparation of Dyer's Special Cream Brand, the milk is converted into the most digestible and nourishing of foods. In fact, in digestion it undergoes precisely the same changes as mother's milk; does not curd like fresh cow's milk, and cannot cause flatulence. This preparation keeps for years in any climate, yet contains no cane sugar or other additions.

EXHIBITS AT NEW ORLEANS.—Every gathering of the profession attracts a certain number of enterprising manufacturers, who display their products primarily as an advertisement for themselves, but really such exhibits of the new and elegant articles for physicians' use prove a source of much edification to the members in attendance.

Because of the ultra-conservatism of the medical profession, articles intended for its use obtain a

firm hold among medical men only after extensive and persistent advertising, and yet in no way can a practitioner keep so well informed as to the new things being offered as by watching the advertising columns of the most widely circulating journals, and by investigating the preparations of the various manufacturers when opportunities are offered, such as were given at New Orleans.

The infusions, decoctions, and nauseous draughts of former days have been supplanted by the elegant abstracts, active principles, and palatable preparations of the present; we have parvules instead of boluses, oleates instead of crude ointments, the elegant gelatine preparations, scientifically prepared disinfectants, concentrated and nutritious infant foods, and peptonized preparations in great variety. All these, and various instruments of precision for diagnostic and therapeutical purposes have been manufactured or invented by just such firms as were represented at New Orleans, who devote their own time, money, and talents to the advancement of medical science.

Such work as above outlined, is, to say the least, collateral to strict professional work, and formerly the physician himself was called upon to perform it. Now the investigations are made, and the remedies prepared for the clinical experimentation of the physician. Each has his duty to perform, and from this co-operation and division of labor, much of the elegance in medicine has resulted.

To show more definitely the advances made in this direction, we have only to ask comparison of the articles exhibited at New Orleans with those in use several decades ago. For instance: Fairchild Brothers & Foster, made an exhibit of various preparations of the digestive ferments. They called special attention to a new product and method, by means of which they so modified cow's milk as to make it quantitatively and qualitatively a remarkably accurate imitation of mothers' milk, or, as they term it, "Humanized Milk." They practically illustrated the method of first making the quantitative mixture, and then effecting the necessary change in the albuminoids (caseine, etc.), as to render them chemically and physiologically identical with the albuminoids of human milk. This achievement is one which promises to be of incalculable benefit in the hand-feeding of infants.

Parke, Davis & Co. showed a full line of soft gelatine capsules, oleates, cocaine products, and a new line of antiseptic and disinfectant preparations, which embody the latest results of scientific research, particularly those reached by the Committee of the American Public Health Association. They presented to each physician on application a unique "disinfectant lamp." This is a small spirit lamp, charged with a fluid which, when burned, liberates and diffuses through the air a disinfectant vapor. Four different fluids are supplied for use with the lamp, which, when burned, evolve respectively chlorine, bromine, iodine, and sulphur.

Messrs. Doliber, Goodale & Co. distributed samples of MELLIN'S FOOD, a soluble, dry extract from wheat and malt, which they have carefully prepared so as to fulfil the requirements of Liebig's principles. As a food for infants and invalids, this one seems to occupy the first place, and is constantly gaining favor.

William R. Warner & Co. circulated literature in reference to their parvules, soluble pills, etc. The products of this house are too well known to the profession to need any comment further than to say that their large exhibit at the Cotton Exposition was awarded the first prize.

Reed & Carnrick did what they could to make the heat endurable by dispensing "medicated ice cream," made from their PEPTONIZED COD LIVER OIL AND MILK, and also tried to counteract the injurious effects of New Orleans catering with their ELIXIR OF LACTOPEPTINE. Both these preparations are prepared in the most palatable form.

The Lambert Pharmacal Company attracted considerable attention with its antiseptic LISTERINE, and alterative LITHIATED HYDRANGEA. The names of both these preparations indicate their uses better than any explanation we could give of them, and their popularity with the profession is the best evidence of their worth.

Tarrant & Co., sole agents for the United States of the *genuine* JOHANN HOFF'S MALT EXTRACT, refreshed the physicians with cool draughts of their liquid food. We understand that this is the only firm in America that imports the genuine article mentioned above.

The Trommer Extract of Malt Company showed the numerous compounds of malt they manufacture. We noticed it plain (for children), with hops, ferrated, with alteratives, with cod-liver oil, etc., in fact, they seem to have made it a nutritious vehicle for almost any kind of medicine.

The most important exhibits of instruments were made by "The McIntosh Galvanic and Faradic Battery Co.," and "The Jerome Kidder Manufacturing Co." The former showed the very latest improvements in microscopes, electric illumination as applied to surgery, and their combined batteries, while the latter exhibited their electrical appliances for physicians' uses.

Other minor displays were made, but the above were the most interesting and important, and all reflected credit on the exhibitors. A. L. H.